

TIME TO RENEW?

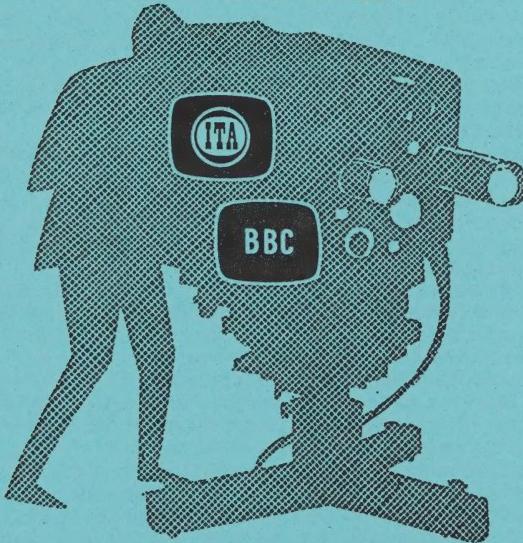
405 ALIVE

RECALLING THE GOLDEN ERA OF BLACK & WHITE TELEVISION

ISSUE 16, Autumn 1992.

Editor Andrew Emmerson, G8PTH

"WE KEEP 405 ALIVE"



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FROM THE EDITOR ...

Progress might have been all right once, but it has gone on too long.

- Ogden Nash

Do you remember Bill & Ben, Z Cars and The Magic Roundabout? Time to start lying about your age then!

- Anon.

This issue represents a partial purge of the editorial "in" tray. Several of these articles have been awaiting publication for some while, so I'm sure their authors will be delighted that they have seen the light of day at last.

Indeed, I'm delighted too, that because of your excellent response, it may often take a couple of issues before articles appear in print. I do try to use everything submitted. Sometimes I will hold articles back deliberately when they go together particularly well. Please keep sending in your contributions, because that's how we keep a lively balance of topics.

Once again we have a fine crop of small ads. It's very gratifying that a lot of people are being referred to us and agree to have their sets advertised here rather than consign them to the dustmen.

A couple of quick giggles, or at least things that made me chuckle. The other day I saw reference to a *perpetuation* (not preservation) society - rather a good idea, I thought. And people who think we're crazy actually wanting to watch 405 line pictures for enjoyment ought to read a magazine I saw in Tower Records. It's called Eight Track Mind and is for people who appreciate the 8-track (Lear Jet) music cartridge! It's American of course...

Financial matters now. I have applied for a credit card payment facility to make it easier to pay, particularly from abroad. Unfortunately I won't get a decision on this for four to five weeks and most of you would not thank me for delaying this magazine another month. More news on this next time therefore.

Lastly, please note it's renewal time. I'll repeat that. IT'S RENEWAL TIME. We really don't want to lose you, so please renew your subscription and don't complain you weren't told! Some of you may be surprised to know that subscription revenue only just covers the cost of producing and posting the magazine - it is not a rip-roaring money spinner, nor of course was it intended to be. But nothing gets cheaper.

I have agonised whether to put up the subs this time: on the one hand my own personal income hasn't increased this year (quite the opposite in fact) so I can quite understand you would resent paying more for 1993. On the other hand, none of the production costs have gone down and the Post Office is expected to increase its charges shortly. Envelopes and paper are bound to cost a bit more too. So I shall increase your sub by just £1; this should absorb any postal increase and also allow a few more photographs. I hope you like the improved presentation of the magazine, by the way. For my part I am very pleased with the new look...

As a sweetener or "thank you", the January issue will be a bumper 96-page issue. Editorially, the contents are already complete and it looks a pretty interesting

read. All that's missing is the advertisement section, a few letters and the tape reviews. Don't miss it by forgetting to renew!

In future, by the way, your address label will show the number of the issue with which your subscription expires. This may be helpful and will cope with the growing number of people who sign up during the year and do not wish to have their subscriptions backdated.

Andy Emmerson

LETTERS, WE GET LETTERS ...

405 Alive welcomes your letters, which may be edited for clarity and space reasons. Any letters or parts of letters not intended for publication should be marked as such, otherwise we'll publish and be damned!

From Simon Hamer, New Radnor:

Belatedly I can confirm Terence Hayes's comment about RTE Network 2's test card music - I can recognise much of BBC test card music from the 60s and 70s. I need to drive up a mountain top to view RTE from Ireland.

You can guess that the Teledu Cymru music was a selection of Welsh songs. The Granada music of 1970 sounds like something from Sir William Walton.

I wonder where Channel TV will take its feed once the new ITV franchises are in being. They had Westward, then TSW off Stockland Hill, utilising a "computer-controlled" receiving aerial at Fremont Point that could alter its side-nulls and polar pattern to "fend off" co-channel interference. I believe BBC-1 and 2 South West were picked up with ordinary aerials, beamed to Stockland Hill, that were prone to some hammering with interference. Because of the distance, selective propagation and fading occur, as with reception of RTE here. The pick-up of TVS and Channel Four is microwaved via Boulogne, as Rowridge was deemed "unreliable".

Interesting story about the construction of ITA Membury channel B12. There was a vacant gap in the 1960s. B12 was the only "spare" channel but the transmissions had to be "directed" (made directional) so as to

"protect" Caradon Hill. The majority of Membury's transmission was in the south Midlands so it was thought best to carry ATV at the time. Hence a joke... Every railway buff will tell you that Oxford station is Western Region (or is it now Network SouthEast?), not London Midland Region. How could you defy him? Answer: you mean the television station - BBC from London but ITV from the Midlands region.

I can also remember ATV's animated opening sequence with *Associated TeleVision Limited* (note the capitalisation) as the "Sound and Vision March" by Eric Coates came to an end. I also have a gramophone record of Eric Coates with a track called "Rediffusion March (Music Everywhere)" but I don't know if it was used by Associated-Rediffusion to start with. I can remember Covent Garden March" by Coates used on LWT's Sunday opening in 1973.

Several interesting points there, Simon. It's probably being pedantic to mention that Oxford used to have an LMS station as well, because the point is well made that radiating Midlands programmes from Membury did seem a bit strange. There is probably a fascinating story to tell about the battles fought over districts which were forcibly transferred from one ITA region to another. Belmont moved from Anglia to Yorkshire if I recall correctly, while the Medway Towns and

west Kent were taken from Southern's coverage area into the London region.

As for the "Rediffusion March (Music Everywhere)", the general feeling is that it was never used for television broadcast purposes. Unless someone knows better...

From Alan Hobden, Ninfield:

Whom are we trying to please? If it's the exhibition-viewing public, then I think they would rather see a 625-line picture on an old set. I can't see then showing any interest in a 405-line blank raster or bar generator.

If we must be more authentic, why not slow the 10kc/s line timebase down to 7.8kc/s and show a double 625-line picture? I used to view Lille on 819 lines by adjusting the line timebase to 10.225 kc/s back in the 1950s. Other mods are easy.

I fitted a UHF tuner in front of a Premier VCR97 televiser and reversed the vision diode... and got a good picture, altering the line timebase speed. I cannot see this as any more unethical than lots of transistors and ICs in a converter between VCR and old TV. It would be more realistic to retransmit on 405 using a camera like amateur television (licensed radio amateurs). No doubt my musings will be shot down but I know my Premier 6" TV works. I was a TV engineer from 1956 to 1968 so I do know my 405.

From Wilfried Meier, Schepdonksweg 11, W-4178 Kewelaer, Germany:

Lately I have acquired three "new" TVs, a Pye console model D18T, Philips model 385U and Marconiphone VT73DA. Unfortunately the last set's Emiscope 3/20 is defective: can anyone sell me a replacement or suggest a source please? The Pye and Philips sets work fine!

From Martin Loach, Dry Sandford:

Thanks for the mag, very interesting as usual. Here are just a few lines you may want to put in the next issue.

I read the article by Pat Hildred and thought I would comment on my experiences with the problem of sync

hooking on displays from a Sony CV2000 VTR.

I have noticed this problem with all CV2000 machines and the problem will of course vary according to the suitability of the monitor time constant. The Sony TV9-90UB is one of the better ones, having been intended for use with this VTR.

However, the effect is still present, and I believe it is inherent in the way the machine functions. Since during recording, tracks are laid down by only one of the heads, and during playback both heads scan the same track twice, any phase error caused by the diametric alignment of the heads is going to be more severe than on a conventional machine where in theory, the same heads read the same tracks they recorded. This is why the effect goes away when one head is removed, thus nulling the mis-timed other signal.

I was able to minimise the effect on Andy's machine, which by the way was more severely affected than on mine, by re-aligning the heads on the bar with respect to their dihedral situation. The heads are very noticeably aligned askew of the diameter anyway, in order for the second head to read the track laid by the first.

Why the effect should be apparently so bad now on all machines is not obvious. But remember, standards were not so high then, there were few other machines around and any kind of VTR was a novelty. Used with a TV of the right time constant, (and a good recording!) the result is in fact near perfect on my well aligned machine. Many VTRs of the reel to reel variety needed modified monitors to cope with the vagaries of the unstable syncs produced by these early machines.

Also worth noting is that this phase error is one of the alignments that have to be carried out when heads are replaced on a Betamax VCR.

From Albert Pritchard, Edmonton:

Please remove the entry about the recommended shop J. & N. Bull as it

has been taken over by M. & B. Electrical, with new address but not specifically TV stuff. It is now mail order mainly.

From Brian Renforth, Sandyford:

Many thanks for the Volume 1 reprint. Honestly, it was really worth the wait! The notes on the last few weeks of 405-line transmissions were especially fascinating: I was very surprised that the BBC engineers took the complaints seriously, thinking they would burst out laughing or whatever!

Locally Burnhope suffered from intermittent variations in brightness/contrast levels with several vertical black lines that seemed to move up the screen like worms. Most of the last few months were especially bad, being on reduced power as well, but on the last night excellent results were achieved with needle-sharp pictures despite the vision faults. The morning after found channel 8 gone but (BBC) Pontop Pike channel 5 continued apparently at very low power (signals were just detectable) and by the early evening weren't there at all, as if they faded out gradually during the day. When realisation dawned upon me I never thought I would see my sets operating at 405 again - how wrong I was, thankfully!

I also heard that in 1983 Wenvoe channel 5 would superimpose a caption over the test card mentioning the phased closure of the 405-line system, and on one occasion relaying Channel Four. This came from a DXer who was active, as I was, on 405 lines. It's true that in most cases "Breakfast Time" wasn't available on 405 but Stockland Hill channel 9 always transmitted the TV-AM programmes. I guess this varied from area to area. North Hessary Tor channel 2 in 1982-3 gave absolutely fabulous results at the time (I was using an indoor aerial) - those were the days!

Has anyone else got good memories of the final months of 405 line transmissions?

From Dave Hooper, Dublin:

Since I last wrote to you I have passed the morse test and obtained my ham licence as EI2HR. Easy to remember, Ham Radio!

I recently found in a junk market some parts of a home-made 30-line TV with disc and motor missing. I thought at first it was a crooked dealer's attempt to make a piece of firewood look like a "find" for some gullible collector like me. However, I took it and no longer think that way for on opening the lamp box up at home I found a top-pip Beehive neon inside (photo 2). Vacant fixing holes suggest that a motor was once fitted, and dimensions indicate the scanning disc to have been about 14" diameter. Photo 3 shows the ground glass screen and photo 4 shows where the neon base was opened to remove the series resistor no doubt. Whether it was made or being made from a kit or just from a constructional article, I don't know. I can't imagine anyone sending boxwood bits by post so I imagine a semi-kit form must have been used. As can be seen in fig. 5, the disc came in front of the ground glass and not behind it as I think was normal. I am now searching for a suitable alloy disc to see what can be done with it. Not 405 but interesting I hope.

Definitely! Keith Wilson also found the remains of a kit-built televisor recently, so these fascinating objects are still to be found 60 years later. You've just got to keep your eyes open at boot sales and in junk shops... Oh yes, well done on getting your amateur "ticker"!

From Paul Sawtell, 20 Seymour Road, Wollescote, Stourbridge, West Midlands, DY9 8TB. (Tel: 0384-896679):

This is an appeal for help! As some readers may know, I am compiling an archive of BBC test card music. In general I have been quite fortunate, with some recordings going back as far as the early 1950s, thanks to the generosity of other people and some official cooperation. One major gap in this collection, however, is the music used in the first two years of BBC2

(1964/65) and I wonder if any 405 Aliver has any recordings or other information. If you have please get in touch; I'm sure we can reach an accommodation!

From Barrie Portas, Waltham:

I got a copy of *Classic TVs* by Scott Wood from the Vintage Wireless Company - it came by return of post. Full marks to V.W.C. this time!

Local auction rooms are still a good source for picking up old TVs. My recent finds have been a Perdio Portorama in working order for £1 and a circa 1970 Murphy V2015D monochrome 20" model in Outrageous Orange, complete with chrome stand, in working order for £3.

These sets, made between 1969 and around 1973, came in the following colours: Quite White, Serene Green, Smooth Blue, Revolution Red, Gentle Grey and teak. Some were dual standard, I think only the monochrome ones, and they came with 20" or 24" screens. The colour sets had 19", 22" or 25" tubes. Rumour has it that if you could not afford a colour set, a small consolation was to buy a monochrome set with a coloured cabinet. Mine appears to be a plastic type finish on wood, but I have seen one with more like a paint finish.

I have fitted a 1950s/60s acetate colour filter to my GEC 12" Fineline portable. I obtained three in their original packet. (Made by Tele-Colour Filters, 352A Stretford Road, Manchester.) The blue section is fitted to the top of the screen, red in the middle and green at the bottom. The results are reasonably impressive.

I'm glad to hear their service has improved, it was very disappointing. In fact their latest news-sheet says they have now recruited more staff, so no doubt it's now business as usual in Bristol. Strange that they don't bother to advertise they have the book you bought, you'd think they would see 405 Alivers as their prime market. Still, that's business...

As for auctions, several other

readers have said the same thing. I sometimes wonder why people complain about dealers' prices when they can do as you do and by-pass the dealers by buying direct.

The Murphy coloured cabinet sets will doubtless become extremely collectible: I just love those "pop revolution" colourways. Some similarly styled hifi units in white and orange are already commanding high prices in the London style shops.

*We've referred to those colour filters (Winner of the 1958 Brussels Inventors Fair") before in these pages, though I can't remember when. For the benefit of newer readers, you unrolled this sheet of tinted plastic and fixed to your monochrome TV screen... and got awful colour pictures. It was intended to appeal particularly to people who watched football and Westerns, the green at the bottom being intended to cover the "grass", the pink in the centre for people's faces, and the blue at the top to tint the sky! No wonder *Which?* magazine called them a load of rubbish.*

From Paul Murton, Manchester:

Thanks for sending me issue 15, another superb edition.

I have answers to two points on page 23.

Firstly, the film Dicky Howett remembers which starred Arthur Askey was called "Make Mine a Million". It was released in 1958. I can remember it being shown one morning around Christmas-time during the mid-1960s (Tuesday 27 December 1966. 11.15-12.35, BBC1) - O.K., so I looked it up.

Among the writing credits was Talbot Rothwell, the man behind most of the "Carry On" films - no comment! The cast included Sid James and Bernard Gribbins, with cameo appearances by BBC sports commentator Raymond Glendenning and 1950s glamour girl Sabrina (a well endowed wench, whose figure would make Samantha Fox look like Twiggy).

The "story" has Arthur Askey as a make-up man working for National TV. He is persuaded by Sid James to interrupt transmissions with a

commercial for a product called (wait for it) "Bonko Detergent". Arthur is then fired, and the two of them set up a pirate TV station!

As Dicky points out this was an awesomely dreadful movie, and so is compelling viewing for fans of kitsch everywhere. No doubt it will turn up eventually on Channel Four, as they seem to delight in running awful British films - and why not?

Secondly, I think I can shed some light on the TV studio used in the film "A Hard Day's Night". It could well have been shot at Associated-Rediffusion's Granville Theatre in London, which was known as studio 6.

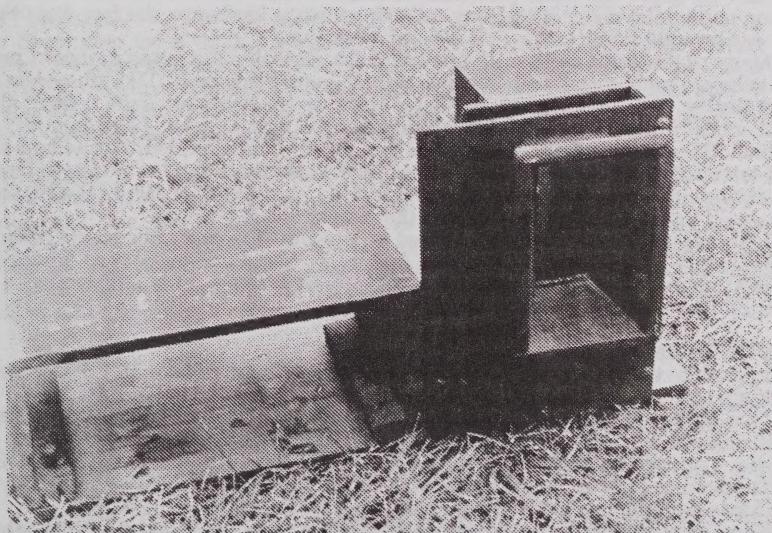
The theatre was certainly in use when the company began operations in September 1955, and was probably still being used up until the company's demise in July 1968. I can't be certain which shows originated from it, but I would hazard a guess at programmes like "Take Your Pick" and "Double Your Money". Incidentally, A-R's pop music show "Ready Steady Go!" would not have come from the Granville Theatre as it was broadcast live from studio 9 (the basement studio) at Kingsway until April 1965, and then until the end of its run from the Wembley studios.

What was particularly striking from watching the film "A Hard Day's Night" was how compact the black and white 405-line technology had become by the mid 1960s. As for the EMI 203, didn't it look exactly what it was: the Rolls Royce of TV camera hardware of its day? Certainly the gallery and camera equipment seemed a lot less awkward looking and much less bulky in appearance than early 625-line colour facilities of the same period.

Also, didn't they do well in synchronising the film speed to the picture field of the gallery monitors; not a single hint of flicker in sight. Try doing that with North American 525-line 60Hz NTSC in 1964.

Finally, can anyone out there confirm that "A Hard Day's Night" was shot at the Granville Theatre? And does anyone know what happened to the place after July 1968?

Keep up the good work.



Dave Hooper's televisor (see letter)

TELEVISION NEWSREEL

BINDERS FOR 405 ALIVE

Great news! THG member Tony Clayden now has a supply of A5-format Easibinders for filing your copies of this magazine (or any other similar sized publication!). Unlike most binders of this kind, which have a magazine title gold-blocked on them, Tony's ones do not; instead they have a clear pocket where you can insert a paper label, making them much more useful. Buy loads and bind all kinds of other magazines too! A binder holds up to 12 magazines and there are two colours, dark green and brown, and the price is just £4.95 plus £1 post and packing. Include a sticky label with your name and address, but no stamps; postage is paid. Cheques made out to A.M. Clayden please: he lives at 64 Exeter Road, London, N14 5JS.

NVCF 93

I misled you wickedly in the last issue. The date for next year's National Vintage Communications Fair at the National Exhibition Centre is **Sunday 16th May** and not the Bank Holiday Sunday. Put it down to a brain-fade on my part, premature senile dementia. More news nearer the event.

DAVID HOFFMAN

Radio Northampton recently ran an hour-long interview with David Hoffman, who was one of BBC Television's first announcers. In this programme he recounts several amusing incidents.

NOT ALL COLLECTORS

We do not all share the same particular interests within our overall fascination for television and whilst many of us enjoy collecting vintage hardware, the fact that others do not was brought home to me with a bump recently.

Many of the guest authors of articles for the magazine (by guess authors I mean writers who are not subscribers) are not what you would call rabid TV enthusiasts but at least enjoy the opportunity (or else were persuaded) to write down their reminiscences for our benefit. That said, two at least aren't collectors of old equipment. So you may share my horror when one of them confided that he had seen a Baird televiser on sale for £25 at a summer fête a few years ago - but he wasn't so stupid as to clutter up the house with a piece of old junk like that. (Little did he know that he could have re-sold it for 100 times that amount...)

Likewise another had been offered a pre-war TV just one week before I contacted him - and had turned it down. And no, he could not get back in touch with the mystery donor. The only good thing is that it proves this stuff is still around - or was until it was taken to the rubbish tip!

FOCUS ON HOLME MOSS

A conversation with the well-known satellite writer and consultant Steve Birkill revealed that he too used to work at Holme Moss (see article, last issue).

One of the tasks he used to be involved with was producing the "Local Trade" test transmissions. Normally the test card and its accompanying music came "up the line" from London, or less frequently from Manchester. But when the Post Office needed to overhaul the microwave and cable distribution network, it was necessary for Holme Moss (and other transmitters) to generate these programmes locally.

Steve says they had a selection of tapes in the bottom drawer of a filing cabinet next to the control desk. These tapes were played on a Ferrograph machine in accordance with instructions and the details logged. The accompanying vision signal

came from 2" x 2" slides in a BBC Designs Department flying spot scanner. This occupied a full 19" rack and had a large CRT mounted vertically. A manually-operated four-slide carousel held the slides; the selection included Test Cards C (and later D), both normal and Reduced Power versions, plus a number of breakdown apology messages. This slide scanner was in turn driven by a monstrous sync pulse generator; all the equipment used valves and was hence bulky and hot!

BOGNOR REGIS WIRELESS MUSEUM

This museum is one to add to your list. It is located at the Local History Museum at Hotham Park Lodge, Bognor Regis (Sussex) and is open every Sunday, Wednesday and Friday from 13.00 to 17.00 during the period May Day bank holiday until mid-September. They have an exhibition called *The Listening Years of Vintage Wireless: 40 Years of Valve radio 1920-1960*. Curator is R.E. Simpson and the collection includes some exhibits of our reader Bob Smallbone. No TV items to my knowledge but it sounds as if it would be worth a visit if you're in the district.

FEEDBACK ON ISSUE 15

Oh dear! Last time talking about the film *A Hard Day's Night* (page 23) I suggested the cameras were EMI model 203 ones. Dicky Howett points out they were Marconi Mk IVs. Sorry about that! And Jeremy Jago suggests that the location was the Granville Theatre, which was used as an overflow TV studio.

The article "Here's a Short Interlude" (page 18) mentioned a number of pieces of mood music used as backgrounds to the interlude. Tony Clayden points out that many of these tunes are available on discs, CDs and cassettes issued by Grasmere Records. 62 Pont Street Mews, London, SW1X 0EF. (Tel: 071-584 9765).

And good news on the Marconi Mk II camera; it's not extinct after all. The head of one was recently exhumed from a crate at the Bradford museum, mis-labelled as a Mk I.

HI-FI WORLD

The September issue of this admirable monthly carried a three-page feature on the Vintage Wireless Museum in London, complete with colour photographs. One picture showed a pre-war mirror-lid TV, while another showed Gerry himself next to the ex-Crystal Palace standards converter. This magazine is worth reading as it displays a sane attitude to good audio equipment, new and old.

NEW MUSEUM

You've heard of the Vintage Wireless Museum in London and the National Wireless Museum on the Isle of Wight. Now here's a new museum which has cunningly combined both titles to become the National Vintage Wireless Museum. I hope they live up to this title, although it certainly sounds as if it has a large collection and a very worthy lineage. Below I have reproduced a letter from Tony O'Neil, the curator, together with his publicity information.

Dear Mr Emmerson

I was delighted to receive your letter and copy of 405 ALIVE - I enclose a cheque for a subscription and look forward to receiving future copies of the magazine. I enclose some information about the museum, which is presently relocating to the High Lighthouse, which I hope you and your readers will find of interest.

The museum was set up in 1984 as a result of the combining of several private collections overseen by a society first formed in south London in the 1930s by my father and his late brother who were, respectively, working in research for Bush Radio and J. L. Baird at

Sydenham and Crystal Palace, and later in radar research with the Ministry of Defence and the Marconi Company.

Much of the collection was on show to the general public at Dedham, Essex, until the Trust took over the High Lighthouse at Harwich some twelve months ago. Most of the refurbishment work has been completed and we hope to be open to the public by the end of this year.

I would be glad if you could pass on news of our existence in a future issue of 405 ALIVE and would be happy to carry copies of your information at the museum should you so desire. I also look forward to further communication with you and subscribers to the magazine - I am sure we have much to talk about!

Wishing you continued success with 405 ALIVE - perhaps we can arrange an ad. for the next issue.

*Yours sincerely,
Tony O'Neil.*

THE NATIONAL VINTAGE WIRELESS AND TELEVISION MUSEUM TRUST

The High Lighthouse in Harwich, built in 1818, has stood empty for some time and in March 1991 the lease of the building was made available by Tendring District Council, who were anxious to see the site utilised. The lease has now been taken by the National Vintage Wireless and Television Museum Trust, who have been negotiating with the Council for several years to secure a building to relocate the museum in the Tendring area, due to its being significantly connected with the history of broadcasting. Marconi's first wireless School was at nearby Frinton on Sea.

The Museum, previously housed at Dedham, Essex, will trace the history of broadcasting from Marconi and Baird's early experiments to the present day developments in satellite communication. The museum will be set out as an informative and educational exhibition showing much of the museum's collection of vintage wireless and television receivers and utilising the latest audio/visual interpretation to create a lively and unique atmosphere.

After minor refurbishment work and rewiring, the museum will be open to the general public; on show will be some of the original equipment used by these early pioneers, demonstrating the first wireless transmissions and mechanical scan television. The building will also house the museum's sound and vision archive.

The museum is set out in a series of room 'sets' tracing the history of broadcasting from the early experiments of Marconi and Baird to the present day developments in satellite broadcasting. One floor of the museum is dedicated to the history of offshore broadcasting.

Particular emphasis will be on the educational facilities at the museum; an educational programme is being planned to cater for visiting school parties and students studying in the field of broadcasting and information technology, within the National Curriculum.

The Museum is overseen by a charitable trust, governed by a board of trustees and its policies are dedicated to provide for the advancement of public education by the provision of the museum.

It is hoped that the relocating of the museum to Harwich will provide a valuable asset to the tourism of the Tendring Peninsula and will enable the living history of British broadcasting to be presented to

the general public in the form of an informative and educational museum for the generations to come.

If you would like further information and would like to become a member of Friends of the Museum Society, please write with SAE to Mr A.J. O'Neil, Curator, National Vintage Wireless and Television Museum Trust, The High Lighthouse, Harwich, Essex.

It all sounds fascinating - we look forward to the opening of this museum and wish them well.

MISSING CONVERTERS

Does anyone know (or perhaps care) what happened to all the 625-to-405 standards converters when 405-line transmissions ceased in 1985? One of our readers was involved in the disposal of the BBC's converters and was told that of the last three, one was for the Vintage Wireless Museum in Dulwich, one was "for a university somewhere" and the last was for "Thorn/Ferguson". And I have only been able to account for one of these, the one at Dulwich. I gather Ferguson at Enfield didn't get the converter, nor is it at Ferguson's (now closed) TV factory at Gosport, so perhaps it went to Thorn-EMI's research labs at Hayes.

A valuable letter from Fred Robins in Fareham says: "I can say with certainty that neither Ferguson or any associated companies have possessed or had a requirement for a 625 - 405 line standards converter.

Back in 1984 when I worked for Ferguson, I did obtain an IBA standards converter ex Chillerton Down together with the technical information and spares with the help of Ray Hills, the then Assistant Director of Engineering (Operations) IBA. This arrangement was as a member of the Management Committee of The Communications and Electronics Museum Trust and nothing to do with Ferguson. I believe the Wireless Museum at Dulwich did obtain a BBC standards converter from Crystal Palace when the 405 line service closed: the Curator, Gerry Wells would confirm if this is true. [It is!]

The C.E.M. Trust have the IBA standards converter in store and intend to restore it to working order to allow live comparative demonstrations of the museum's working collection of 405 line TV receivers. Our collection includes part of the Chillerton Down 405 line high-power vision transmitter in addition to the complete standby sound and vision transmitters and flying spot scanner caption generator. The C.E.M. domestic exhibition is open at Puckpool Park and Arreton Manor, both on the Isle of Wight. The collection includes many early radio and television receivers including a fully restored and working Baird 30-line receiver in addition to a very rare Baird 30-line/EMI 405-line dual-standard receiver, the world's first dual-standard receiver."

AND ANOTHER STANDARDS CONVERTER

Dave Grant writes from Bromley: "I look after the televisions at the Vintage Wireless Museum in London. Recently I had quite a lot of repair work on their C06/509 digital standards converter and extensive examination of the manual led me to believe that the task of building a similar unit with modern components would be comparatively simple.

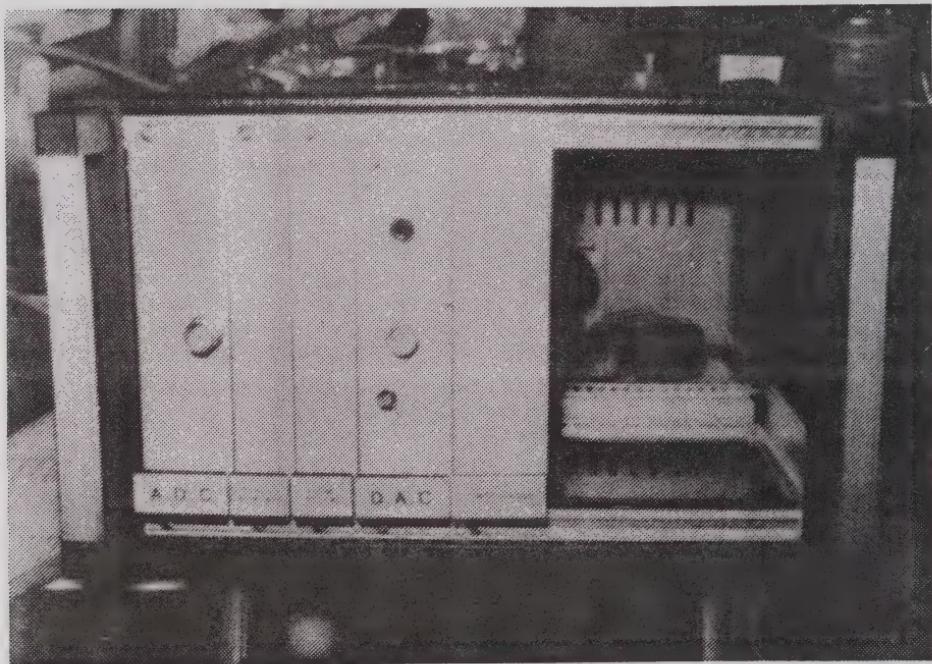
"So I set to the task with zeal. The result is a small unit in a half-width racking case (see photo, sorry about the quality - old film!). I put this on show at our annual garden party where it attracted much attention. Many people suggested I should tell you about it, hence this letter. I intend to build a few of these and I think some of your readers would be interested. It may take some time to realise this ambition as I will have to make PCB designs for it. I have recently added a simple interpolator, which has brought about a radical improvement in picture quality, but eventually I hope to implement a full 4-line interpolator working on the same standards as the BBC unit.

During the period of the Olympic Games my unit should be working as part of an comparative demonstration of Philips HDTV equipment.

"P.S. The converter does of course include a Band I modulator!"

This sounds very interesting. I believe most people will want a converter with full interpolation: it seems a shame only to get close to perfection. People are doubtless waiting for the next gripping instalment...

[AE]



Meanwhile work continues feverishly in other people's standards converter laboratories. David Boynes writes: "I am now trying out an 8-bit analogue-to-digital converter (A.D.C.) chip. This evening a sub-board employing a Datel 8-bit IC was installed into the prototype F.I.F.O. (first in, first out) converter. Of course it did not work properly at first: a negative picture appeared on the 405 monitor. The output data from the A.D.C. was inverted as a pin on the chip determines the output sense of the data, either positive-going or negative-going. After sorting out that problem the picture was still not satisfactory. The output from the Most Significant Bit was missing; the eighth data line had been shorted to ground. Removing the earthing link produced data but the picture still looked strange until a pin selecting normal binary or two's complement was attended to.

"The picture was now looking much better; adjustment of the reference levels at the A.D.C. input corrected the clipping of dark greys. The results from the 8-bit converter are much better than the 7-bit system employed in my present design. I'll run the new converter for a few days and then assess performance after the initial euphoria has died down."

We are attempting to obtain an English translation for those who don't understand a word of this but in the meantime don't worry: just wait till you see the results!

Finally, you will see in this issue an advertisement for a standards converter which should be on the market in December. I think this is an interesting development but I must stress that at this stage I have seen no working sample of this or any other promised converter. I invite all potential suppliers to submit a sample for a brief evaluation on loan and we will then put these through their paces. After that it will be up to readers to make their own purchasing decisions on the basis of price, performance and availability.

USEFUL TIP

Readers who do not read *Viz* magazine will not have seen this handy idea.

Before leaving the house to go shopping etc. plug the phone through your video recorder. That way, if someone rings while you're out, you'll be able to see when you get back who called. Probably.

NEW CATALOGUE

An extremely nicely printed catalogue (printed on recycled paper) dropped through the letterbox. It's called the Audiophile Components Catalogue and what's more it's free on request from Russ Andrews on 0539-83247. Prices are not at surplus level but the book is a valuable source of high quality resistors and high-voltage capacitors designed specifically for valve circuitry; these are getting hard to find nowadays.

COPYRIGHT QUESTION

It is understood on very good authority that the BBC (possibly BBC Enterprises) recently took action against an individual who operated a lending library of recordings of old radio programmes. His activities might be viewed as entirely harmless, even public-spirited, by most people. At the same time it must be said with equal rectitude that these activities might have deprived BBC Enterprises of sales they might otherwise have made of programmes released on audio cassette and CD.

Whatever your personal view of the rights and wrongs of cases such as these, the basic law of copyright is perfectly clear. You are not entitled to duplicate material that is not yours; buying a book, a record or a tape does not entitle you to make copies, whether for gain or not. In the event the action against this unfortunate individual failed for unforeseen reasons but the outcome was by no means a happy one in other, personal, ways. Readers may wish to consider the implications of this.

THE STREET OF SHAME

Dicky Howett samples two current television exhibitions.

First the good news: The television exhibits at the National Museum of Photography Film and Television are getting better and better. If you haven't yet visited this superb museum then it's high time you did. It's a free museum (a rare breed indeed), although the not-to-be-missed optional IMAX film show is charged for. Apart from the floors devoted to film and photography, I have over the past few years detected an enlargement in the television-related exhibits. This, as one is bound to admit is something to be encouraged!

Currently on display in the foyer (Sept 1992) is an extremely large and elderly camera. This camera is one of the Marconi versions of the RCA TK 41 three-tube 3" I.O. colour camera. This particular camera was originally part of a consignment hired for use by Rediffusion at their Wembley studios to record 525 line colour shows for sale to the USA. These shows produced between 1965 and 1968 (which were recorded simultaneously by a separate set of monochrome cameras on 405 lines for home use) included a Beatles spectacular and the circus variety show "Hippodrome". Copies of these shows have yet to surface in retrospectives, so perhaps they are lost to posterity? The Beatles tape alone would be worth a fortune and in colour too!

The Marconi colour camera in the N.M.P.F.T. foyer has mounted beside it, by way of contrast, a baby. This sonny is a Sony. What else? Although it's a studio camera, (one of the last Japanese three tube machines), it still looks small enough to put in one's pocket. The Marconi camera on the other hand is big enough to lay down in. It wasn't christened the "coffin" for nothing. R.I.P British television technology.

And the Bad News is..... The Granada Studios Tour. Which is precisely what it isn't, a studio tour that is. At no time does anyone get anywhere near the "real" Granada Studios. So what's left? Well, precious little. Oh, you get the usual "pretend" stuff for the masses plus the "real" outdoor Coronation Street set for the adoring fans. All pretty boring for us knowledgeable telly chaps especially at £9 a head admission charge.

There's the "backstage tour", which is a conducted route march through a series of "rooms". These rooms purport to be working television production areas (all the "rooms" are empty and slightly untidy giving the impression that the workers have just popped out for a cup of tea). What we see is a collection of convincing reproductions of where, for example the make-up is done, the properties are stored, the costumes are made, and the film is edited. There is also a "studio" equipped with three redundant Marconi portable cameras mounted on 30 year old Vinten H.P. pedestals. The Masses get "hands on" experience in the "studio", proving once again that almost nobody knows how to line up a shot. Whilst all this nonsense was proceeding, I sidled off and poked my head through a side door, as did so I caught sight of Mole Crane. It would have made my day to have had a ride on that! Of course that would have been too much like the real thing, chuck!

The remainder of the tedious tour consisted of a look at the "House of Commons" and "Baker Street" sets. All very flimsy and tatty. A half-hearted effort which for my money is really not good enough Granada.

The whole "studio" site is situated in the grounds of a converted Victorian warehouse complex abutting the Granada Studios proper. But be warned. Travelling in by car is a bit of a nightmare. The publicity states that the area is well signposted. In the event we didn't see a single sign post. We must have circled Manchester twice before we eventually stumbled upon the place. Another warning, the "Tour" car park is expensive. A tip, go next door to the Museum of Science and Industry. The parking's cheaper as is the Museum's entrance fee. The show's much better and all

the exhibits are for real... and they even have a Baird Televisor on view. Eat your heart out Ena Sharples!

H.P. ... hydro-pneumatic
I.O. ... image orthicon

AN INTRODUCTION TO COLOUR

by Bernard Wilkie (BBC 1948-1978)

I find it difficult now to remember the time span between the BBC's announcement that it was to investigate the use of colour and the first test transmissions. At the time of the early experiments I was working at Kingswood Warren (BBC's Engineering Research department) and although I played little part in events I was fascinated by the many developments that were taking place there.

A particular memory concerns an incident when I was invited to watch pictures from "the whirling disc", a fearsome device standing five foot high in an angle-iron frame. Incorporating a 24 inch Perspex disc with applied coloured gels it involved switching monochrome pictures in synchronisation with the rotating segments.

Here, I realised, was history in the making - Logie Baird all over again! I was about to see my first ever colour TV pictures, and my excitement was intense. Firstly the machine had to be run up to speed and I stood with bated breath as the motor was switched on and the low hum became a high pitched whine. But something was wrong. Strong sunlight from a nearby window was shining on the screen and obliterating the picture.

My dear old chum Reg Vigurs, co-creator of the device, decided to deal with the situation by turning the machine away from the light. Unfortunately Reg overlooked the fact that a high-speed whirling disc is called a gyroscope and while the frame offered no resistance to being swivelled into a new position the 24 inch disc refused to co-operate. The sound of its disintegration could have been heard a mile away. After that it took a little time for me to overcome my natural fear of colour television, but later, when I took part in experiments to test preferred levels of brightness and saturation on a conventional receiver I became colour's most vociferous advocate. But those were the early days.

As well as being privy to the introduction of colour at Kingswood, I was to move to Television Centre where I would take part in the first live colour transmissions.

As I said, I can't recall the time span, but it did seem extremely protracted. To blazes (some of us thought) with all the pussyfooting, the strictures from the Postmaster General and the un-cooperative industry that saw greater financial returns in making more and more black & white receivers. "Let's bring on the colour!", we demanded.

Of course, it was easy for us. Engaged in television production we had, for many years, been working in colour. Make-up was in colour, props, sets and costumes were in colour, and apart from the use of black and white photo blow-ups and the occasional use of monochrome artefacts, the trauma of providing a full colour service would affect us not at all; we were all set to go and fed up with seeing our best efforts reduced to black and white! We wanted colour to become the norm.

Eventually after several years the great day came and we were issued with brand new domestic colour sets. (Well, we did have to judge our own work, but the

one-upmanship amongst the neighbours was almost worth a drop in salary). And so we launched the service.

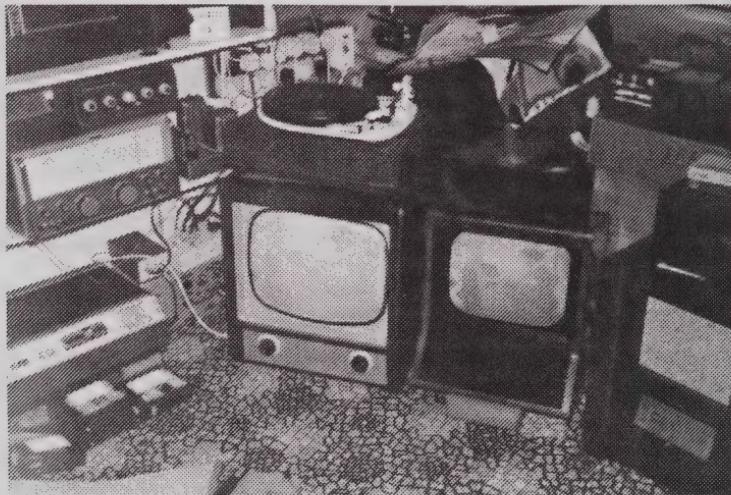
But, for me, the real impact of colour had occurred several months earlier when one afternoon, unaware of a new installation, I was setting up a model in the studio. Alongside me was the usual monitor displaying the boring grey scale used for camera alignment (a sign which meant we were approaching the afternoon rehearsal session and that I should keep an eye on the time.) when, suddenly, whilst I watched the monitor, a hand came into shot holding a small sticker which it applied to the card.

That hand, against the grey, was in full colour! I just couldn't believe it. My mouth fell open and I stood, as they say, riveted to the spot. I don't know whose hand it was, but for me it was the most astoundingly, magnificent and beautiful object I had ever seen. From now on it was going to be roses - pink, gold and crimson - all the way.

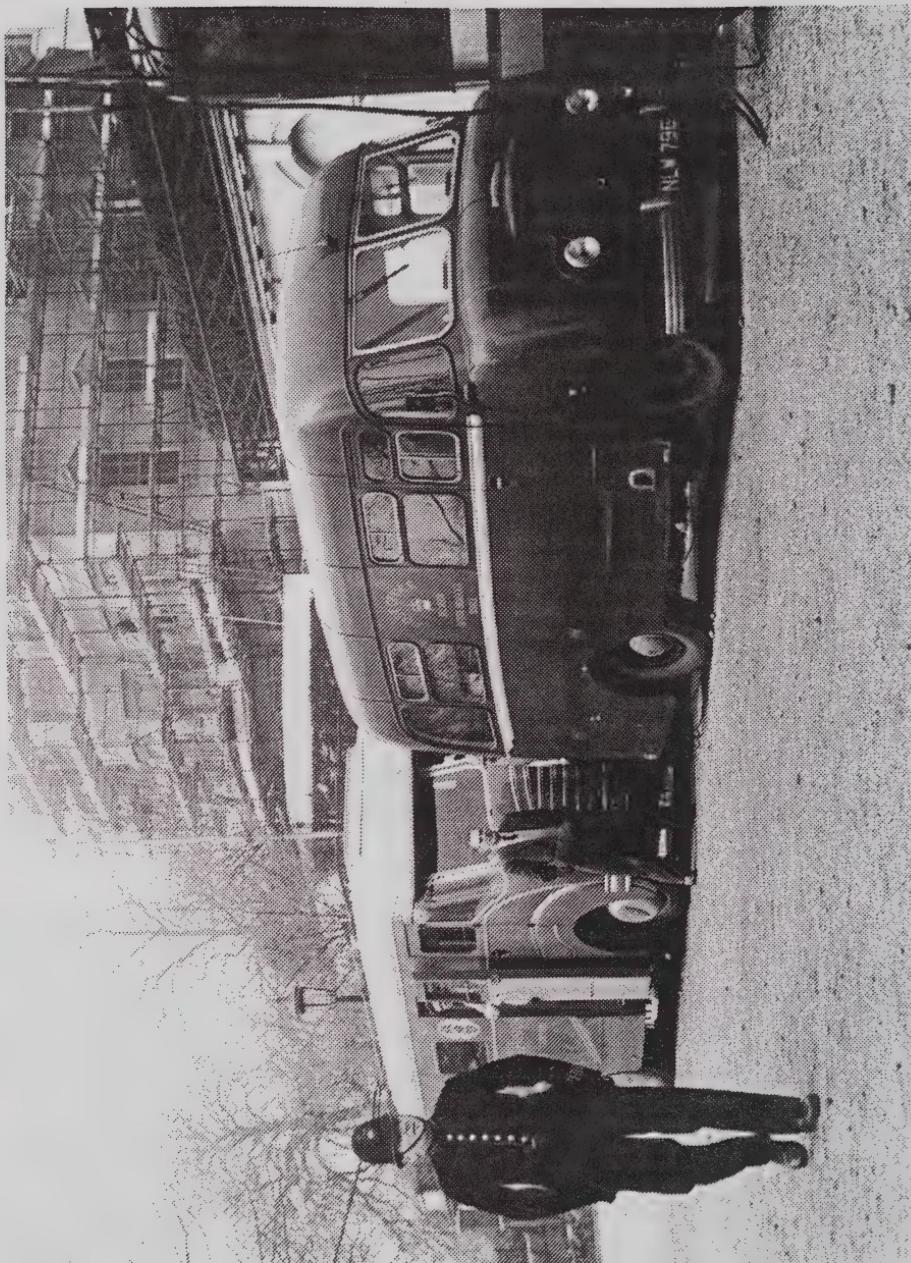
ON THE NEXT TWO PAGES:

1. Malcolm Burrell discovered a fascinating article in the Sunday Times for 16th April 1939. It describes the prospect of exporting projection systems to New York, a "Midland" TV transmitter (which did not materialise until ten years later) and some old Chaplin films being televised.

2. "Evenin' All!" Vintage OB vehicles capture the wedding of Princess Alexandra and the Hon. Angus Ogilvy in 1963. Dicky Howett was there along The Mall, Box Brownie at the ready!



ABOVE: A corner of Ray Whitcombe's "den" with two 405 line receivers taking pictures off the Philips 1500 VCR.



PICTURE PAGE

All the latest video reviews

Readers' own reviews are most welcome, so send them in for publication!

SYKES AND A BATH. BBC VIDEO BBCV 4815

A timely reminder here of the talents of the resident of 24 Sebastopol Terrace, i.e. Eric Sykes Esq. Here are three episodes of the "Sykes and..." series which began in 1960 with "Sykes and a telephone" and only came to an end as late as 1980 with the sad loss of the formidable Hattie Jacques. Able supporters on this cassette are Richard Wattis as posh neighbour Mr Brown and the wondrous Deryck Guyler as Corky the ever-present local plod. The whole setup is marvelously nostalgic - Eric and Hat's idea of a great night in is a steaming fish and chip supper in front of the telly. They live a life of full cooked breakfasts and coal fires: wonderful!

The comedy is good clean family stuff of course, all written by Sykes (who proved his worth a few years earlier by occasionally co-writing The Goon Show - a task not for the faint-hearted!). On the technical side, all shows seem to be as originally presented - no suspicious video stills concealing the bits we like to see!

Each programme is a 16mm telerecording, although each has its own particular picture and sound quality. The first two programmes do not have a "BBC-tv" end caption - I wonder why? Perhaps the BBC thought that at the time no-one was likely to confuse their output with that of ITV! The third programme on the tape is obviously a little later, as the BBC-tv caption is present, but Richard Wattis is not - I believe he died fairly early in the 60s. Summing up, a superb tape which leaves you with a nice warm glow for times past.

[SJ]

CHARLIE DRAKE: THE WORKER. ITC 8176. £10.99

Two reviews for the price of one!

More sit-com titters with another comedian who has been rather overlooked of late. The Worker was Charlie Drake's hugely popular 60s ATV series. Previously he had appeared in BBC and ITV children's programming and another BBC series, "Bingo Madness". The three episodes on this tape are copyrighted 1970. A closer read of the video cover reveals the heading "The top comedian of the 60s returns in this classic comedy series" - Ah, so they're not actually saying that these are 60s episodes... hmnnn. The problem here it seems is that the episodes appear to be black and white tele-recordings of long-trashed colour VT! This of course has precluded the use of ATV logos - the chimes at the front would of course begin with the words "IN COLOUR" and the card at the end would say "ATV Colour Production" - and probably confuse people who thought they had a faulty tape! Actually it does seem that the glorious initials "ATV" are destined not to appear on any ITC tape (although of course they would only be on studio-based productions, not filmed series). These episodes of The Worker are funny if you are in the mood, although by 1970, probably the best ideas had been used up. And Charlie had the sophisticated (!) and popular humour of "On The Buses" to compete with! He is far happier with a plate full of custard pies than a saucy innuendo...

[SJ]

"Hallo my Darlings!" Yes, that was your catchphrase (E.J. Thribb). Sorry, where was I? Oh yes, "three rare and complete episodes" of "the ever lovable Charlie Drake in his major TV series which turned him into not only a TV star but also the nation's

darling". Really, who does write this drivel?

In fact these three black and white episodes of a not-that-memorable ATV series are interesting... interesting but strange. I think bizarre is the word and the fact that our hero is sent to work at the Kinky Car Wash sums it up. This is intentionally weird comedy, as weird as Marty Feldman, Monty Python or some of the Swinging Sixties films like *The Bliss of Mrs Blossom*.

Sociologists of the next century will have a hard task trying to fathom out what this was all about, and I suspect the majority of people who lived through this era will not associate with this programme. Its competent stuff but don't blame me if you don't like it. Oh yes, the closing titles on each episode are inept recreations; I wonder why, unless they wanted to avoid the ATV emblem appearing on screen.

[AE]

NEW BOOKS

Just room for a quick mention of some new titles.

We normally leave the mechanical television field to BVWS, the NBTVA and Ray Herbert's Baird Newsletter, but a lot of you also study this subject, so it would be wrong to omit mention the following titles.

A superb retrospective on the mechanical or Baird era of BBC-TV has been written by Tony Bridgewater and published by the British Vintage Wireless Society. Of course BVWS members will have seen this already but others may wish to avail themselves of a copy while it can still be had. The price is £4.50 post-paid and cheques should be made out to BVWS. Ask for the "TV Supplement" and write to Robert Hawes, BVWS, 63 Manor Road, London, N17 0JH. This booklet is likely to become highly prized in future. The October issue of *Practical Wireless* is their Diamond Jubilee issue. Among the many fascinating articles is one by Ray Herbert G2KU all about the 30-line days of television - get it quick!

Vision by Radio. C. Francis Jenkin. (Reprint of 1925 title). Fascinating book, written for purposes of self-glorification by C. Francis Jenkin of Jenkins & Jenkins Laboratories Inc., who were much involved in early high-speed cameras, as well as what was an early fax machine. Whilst glorifying Mr Jenkin's achievements, this book gives very fair coverage to other forms of transmitting pictures by radio and to a lesser extent, by television. This is a 140-page paperback with numerous illustrations. Lindsay Publications, £6.85 + 85p P&P.

Experimental Television. Collins (Reprint of 1932 title). This book explains quite simply how to build cameras, transmitters and receivers for the scanning disc system. 312 pages, well illustrated. Paperback. Lindsay Publications, £7.95 + £1.05 P&P. This and the foregoing book are imported from the USA by Camden Miniature Steam Services, 13 High Street, Rode, BATH, Som., BA3 6NZ. Tel: 0373-830151 (24-hour credit card orders). They offer a superb catalogue of early wireless (and other) books - tell them 405 Alive sent you!

Timescreen issue 19, £2.95. The latest issue (40 A4 pages) is now nicely typeset and contains a 13-page interview with Brian Clemens, whose TV credits run from Danzigers programmes of the late 1950s, through *The Avengers*, *The Champions* and *Adam Adamant Lives!* to the present day. By subscription only and heartily recommended. Time Screen, 88 Edlington Lane, Warmsworth, Doncaster, DN4 9LS.

TELETALK

by Malcolm Burrell

More about heater chains

Early TV receivers usually employed parallel heater chains but the advent of AC/DC practice heralded the series chain with (usually) an accompanying "mains dropper" resistor. Heater chains usually encompassed several common design criteria. For example, in the interests of "hum" reduction the heater for an audio output valve was usually placed at the "earthy" end of the chain. A boost diode or an HT rectifier was placed at the high potential end since these valves had a higher degree of insulation between heater and cathode and were not, of course, amplifying minute potentials.

The heater for the picture tube was normally placed near the "earthy" end and was frequently the final heater in the chain. This usually afforded some protection in the event of heater/cathode short circuits occurring in valves with heaters "higher" in the chain - after all a replacement valve was less expensive than a picture tube.

CRT isolating transformers

Some picture tubes were prone to various types of inter-electrode leakage. A common problem was a heater/cathode leakage which either resulted in complete loss of - or occasionally severely impaired - vision (usually an uncontrollably bright raster). Of course a replacement tube was the ideal solution but isolating the heater from its place close to earth potential was cheaper and more practical. This was accomplished by disconnecting the CRT heater from the chain, and externally short circuiting the CRT heater supply leads to ensure heater chain continuity, then fitting a small heater transformer featuring low capacitance between the windings to supply the CRT heater.

These isolation transformers were quite common and often equipped

with a tapped secondary winding to provide additional outputs of 10 per cent and 20 per cent higher potentials. Thus they were sometimes also employed where a tube with failing emission was in use. The higher heater potential sometimes considerably increased the useful life of the picture tube. This practice has continued in some cases with colour picture tubes.

CRT heater S/C

Having described the use of isolating and "boost" transformers, another instance of their use was where the emission of the picture tube was impaired by a partial short circuit of the heater. This was again a fairly common problem. With the heater connected in the receiver heater chain it might seem to possess a minute glow and the screen image would be extremely dim or non-existent. An isolation transformer would restore operation to the usable part of the tube heater, sometimes causing it to shine like a small lamp! Surprisingly some picture tubes operated for years under these conditions.

Rebuilt tubes

Once the pages of *Practical Television* were full of tube rebuilders. Some were good, others more dubious. It seemed you needed to pay for quality. Initially some only fitted new electron guns. One or two firms offered the choice of fully "rebuilt" tubes or tubes that had been "re-vacuumed". The latter were, of course, cheaper.

CRT Grid-Cathode leakage

I can recall fitting a "re-vacuumed" tube which produced an acceptable but not startling image. One day I discovered that whilst the brightness and contrast were interdependent, the control position at which minimum brightness could be achieved was dictated entirely by the contrast control and it was

impossible to fully black-out the picture. The tube had a grid/cathode leakage. This was largely overcome by removing the brightness control connection to the grid, connecting this electrode to the cathode then connecting the former grid connection to the first anode, having first disconnected the first anode connection. This provided a solution albeit with a rather dark picture.

In retrospect I should have modified the brightness circuit to operate from the boosted HT line. Problems were not at an end, however, since the tube subsequently developed an O/C heater the following week! All was not completely lost because I was able to produce a "weld" by flashing it from the top cap of the line output valve. The following week the heater went O/C again and that was the end! I wonder if instead of "re-vacuuming" the device, the unscrupulous company simply employed a tube rejuvenator!

Rebuilding twin panel tubes?

Most tube re-builders felt it unsafe to tackle twin-panel types of the sort found in KB receivers in the late sixties. It was a welcome relief when one day a company did advertise them. One was ordered and duly delivered but seemed suspiciously "clean" but "untouched". Within days the emission fell considerably and I strongly suspect it had - again - simply been only "boosted".

Lumenar tubes

Ecologically its better to utilise an old glass than scrap an entire device. For a while Mullard supplied re-built tubes under a label known as Lumenar. They seemed consistently good. Another firm which advertised was Lawson tubes. These tubes were equipped with new guns and a new phosphor. The arrival of colour, however, seemed to curtail such claims since laying a new phosphor dot screen in a colour tube is no mean feat!

Of course we live in a virtual "throw away" labour-intensive society. Perhaps a re-built tube might be

economical but the cost of fitting is prohibitive. Such tube re-builders as survive have probably done so by using integrity and ensuring a high quality product.

Ex-Govt CRT!

In my early days of experimenting with TV receivers I acquired a Ferguson 998T 12" chassis. Since I had no suitable tube (that specified was the MW31-74) I finally bought a surplus CV429 (12") from Padgett's Radio Stores in Leeds. The device arrived in a huge wooden crate. It proved longer than the domestic type but had similar electrode connections. Once fitted a rather superb orange and black image was to be seen. The phosphor had an extremely long persistence which mystified people when they watched a snooker tournament!

Telesurance

A few months were spent as a Claims Clerk in the (then) Windmill Street, London offices of Telesurance. Throughout the fifties and sixties many TV dealers offered a maintenance contract backed by this Company which made a fixed allowance to the dealer for each repair plus the cost of components. Most dealers were honest in their transactions but I was required to ensure that, for example, the dealer didn't try to claim for supplying two PL81 line output valves for one receiver!

Usually there was no requirement for faulty components to be sent to Telesurance but they did expect cathode ray tubes to be submitted for inspection. A colleague was quite proud of the "receiver" used for testing almost all types of monochrome picture tubes. It boasted variable heater and EHT voltages and could drag a picture out of a stone if the potentials were wound up sufficiently high! Nobody seemed to consider the possible effects of X-radiation by subjecting a poor little 9" tube to 25kV!

Designing-in Safety!

Most modern TV receivers are designed

to utilise flame-retardant materials where possible. In their manuals makers now specify "critical" components which must be replaced with an approved type. Forty years ago the engineering solution to a resistor inclined to overheat under certain conditions was to fit one of high wattage rating - today's equivalent of fitting a nail in place of a 1 amp fuse! Of course, then resistors weren't thought upon as "fuses" although in some instances today they are. With barely a puff of smoke, certain low wattage film varieties can become O/C almost as quickly as any fuse.

Philips seemed the first to realise the potential. During the sixties, resistors in critical positions were mounted clear of the PCB on tags ("drop-off" resistors). If a fault, e.g. a S/C in a valve, caused the screen grid resistor to overheat, the solder also melted and the resistor fell (usually safely) to the bottom of the cabinet: the PCB usually remaining completely undamaged. The repairman located and corrected the fault then re-fitted the resistor. It is important to stress, however, that this concept demanded that the resistor be secured *only* by the solder and placed *beneath* the tags: the connecting wires were *not* wrapped around them.

Although encapsulated in plastic, some capacitors used with high voltage pulse circuitry in early colour receivers proved to be unsafe. Urgent memos circulated around rental companies and from manufacturers to dealers urging inspection and the fitting of approved replacements. More than one serious fire resulted from this being ignored.

Early line output transformers were covered in pitch. Today they are insulated with flame-retardant materials. I recollect serious problems with the Bush CTV25 colour TV line timebase. In the original design the full 25 kV potential was derived from an overwind on the LOPTX and applied to an EHT rectifier and shunt stabiliser. These were quickly changed to use a different transformer design in

conjunction with a solid state voltage multiplier.

Hazards of EHT

Whether or not they pack sufficient punch to kill, high voltages, and particularly EHT potentials present several hazards. They have the ability to create arcs which can easily cause a fire. Any sudden high voltage discharge can instantly destroy the microscopic functions between semiconductor materials in modern equipment (more about this later). They also have the ability to cause involuntary muscle contractions which can result in delicate or irreplaceable items being destroyed by the sudden withdrawal of a hand from the confines of a TV chassis. Such a reaction resulting from contact with a charge upon a final anode can also result in a picture tube, once removed from a TV receiver, being accidentally dropped - with horrifying results.

Insulation

It's a few years since I was last involved in servicing TV receivers but even with modern materials I discovered that EHT potentials have not altered their desire to contact the nearest convenient point of opposing polarity! And a microscopic weakening in a piece of insulation is sufficient for the purpose!

Where EHT is concerned, insulation materials should not be taken for granted! It was not uncommon to be called to a receiver where the customer complained of a "whip-crack". Ninety-nine per cent of these cases were due to some form of arcing from the DC side of the EHT supply. Following inspection, upon applying power to the receiver the fault might not be apparent since it could in some cases depend upon temperature and humidity.

Picture content could also be a governing factor and it was useful to turn the brightness to minimum in an attempt to induce the problem by reducing the beam current loading on the EHT supply. Any doubtful areas were cleaned, however, since dirt and

an alteration in the properties of any varnish previously applied to the final anode connection could instigate the problem. In other cases where a solid state voltage multiplier was involved a pinhole in its insulation might have caused the problem in which case replacement was the only safe cure.

Many insulating materials seem prone to gradual deterioration when subjected to high voltages. Of particular note, the perspex housing used during the late fifties on some Ekco line output transformers tended to crystallise and smoulder. Most dealers were able to obtain replacement housings which rendered the unit safe for a year or so after fitting.

On older sets EHT cable insulation might well have been a form of rubber composition. Rubber deteriorates with time! Therefore, even with the receiver switched off exercise care when working in the proximity of insulated high voltage cables since any charge retained by the picture tube will discharge to a hand or any other object through any insulation breakdown! Even modern cables are not beyond reproach.

In some early receivers NO covering was made to the EHT final anode connector whilst later receivers used a rubber or plastic cap. Avoid the temptation to take a grip on this either when testing for EHT or even when disconnecting the lead since any weakened insulation can result in a nasty shock!

Repairing EHT Cable?

There were often unscrupulous repairs. For various reasons EHT cable was joined in the course of repair and the connection smothered in insulation tape and/or grease! The ONLY cure for a defective EHT cable is a replacement!

Flashover from Final Anode

As previously mentioned, flashovers from the final anode connection will usually be due to the presence of dirt or dampness. In mild cases no flashover will be apparent but a faint "crackle" or "ticking" might be heard perhaps

accompanied by a smell of ozone in its vicinity. The area should be cleaned with alcohol or methylated spirit. Also clean the insulated cover. Many engineers smother the connection in silicon grease but this tends to break down. I once found substances like WD40 could provide continued protection if sparingly sprayed around the area to leave a thin film.

On receivers with some method of EHT or boost voltage adjustment, ensure that the EHT potential does not exceed the specified value. On older receivers this could occur if a modern solid state HT rectifier has been used to replace an older valve or selenium type in which case the HT voltage might be considerably higher than that specified in the maker's literature.

"Brushing"

Leakage of current from the "AC" side of the EHT rectifier will often be accompanied by a "hiss". The effect could cause on-screen interference in the form of a bright jagged vertical bar since, of course, it occurs at line frequency. (The interference from a 405 line receiver would appear as a black, unlocked line frequency interference on a 625 lines receiver, however.) Upon close scrutiny of a suspected area, "brushing" can often be perceived visually in a darkened room as a bluish glow.

Whilst the effect could originate from the connections to the EHT rectifier valve, other causes were often the proximity of loose cables to any line output components, a poorly secured inductor (linearity coil, LOPTX, etc.) or even internal arcing within the transformer. Particularly where wired EHT rectifier connections are used it is important to insure that any soldered joints are rounded and free from jagged spikes.

In severe cases of "AC" arcing, however, there is usually no difficulty in locating the source since the spark is particularly spectacular and destructive!

Discharging the Final Anode

Ensure power is disconnected from the receiver. Clip a short piece of cable securely to the chassis metalwork - or to a known earth point in the set. Attach the remaining end securely to the blade of a long screwdriver equipped with well insulated handle. Slide the blade of the screwdriver under the final anode cap and discharge the connection. It should then be safe to remove the final anode connector and start any necessary work.

NOTE that it is desirable to periodically discharge the final anode or, alternatively, make a permanent earth connection to it whilst working in its vicinity since the charge can return even if the set has not been subsequently switched-on! Better safe than sorry!

On very modern sets there is often only one, common, earth point where any shielding etc. is connected. As mentioned earlier, semiconductors are prone to destruction due to flashovers so picture tube designers usually specify the position of any earth point together with, perhaps, provision of "soft-flash" technology to minimise any damage. If working on a modern receiver, follow the maker's instructions!

Testing for EHT

Strictly speaking the only reasonably "safe" method to check for the presence of EHT is with a probe connected to a meter. This certainly applies to colour receivers where potentials in excess of 25kV at over 300mA may be encountered!

Where monochrome receivers equipped with valves are concerned most engineers relied upon the rather spectacular method of drawing an arc! 1kV will arc approximately 1.5 mm in free air. Thus 10kV will arc approximately 1.5 cm. using a screwdriver with an insulated handle, the blade is placed on the final anode connection and an attempt made to create an arc to an earthed point on the chassis metalwork. An aquadag

earthing spring usually makes a convenient earth point, however it would be unwise to create an arc directly to the aquadag coating in case the spark damages the picture tube glass!

When searching for EHT on the "AC" side of the EHT rectifier, it is usually sufficient to hold the screwdriver close to the base of the EHT rectifier when a healthy spark - or a least a blue corona - should be visible.

Touching the top cap of a line output valve should result in a healthy, though quite small, spark. Again the screwdriver does not need to be in contact with the chassis.

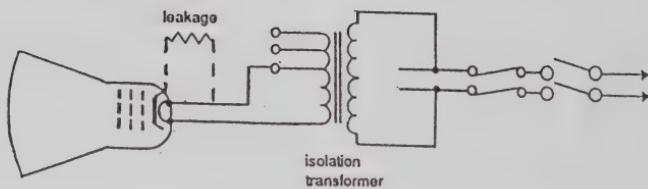
Caution

Of course, these procedures apply to sets with EHT derived from the line flyback. Shocks can, as previously described, be nasty although in the majority of cases not lethal. When dealing with colour receivers or those where EHT is obtained by another method (e.g. directly from the mains supply) don't take chances. In fact, if you're nervous about what you're doing the best advice is DON'T!

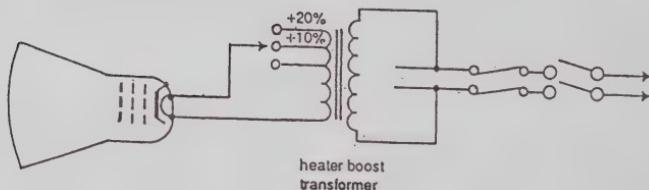
To be honest, service engineers became accustomed to working on "live" equipment and were usually aware of the hazards. Electricity can be unpredictable, dangerous and sometimes lethal!

LEARN THE JARGON!

AC	alternating current
CTV	colour television
DC	direct current
EHT	extra-high tension, a lethal voltage (thousands of volts)
HT	high tension (hundreds of volts)
LOPTX	line output transformer
O/C	open circuit
PCB	printed-circuit board. In other contexts it can mean a hazardous substance formerly found in capacitors.
S/C	short-circuit



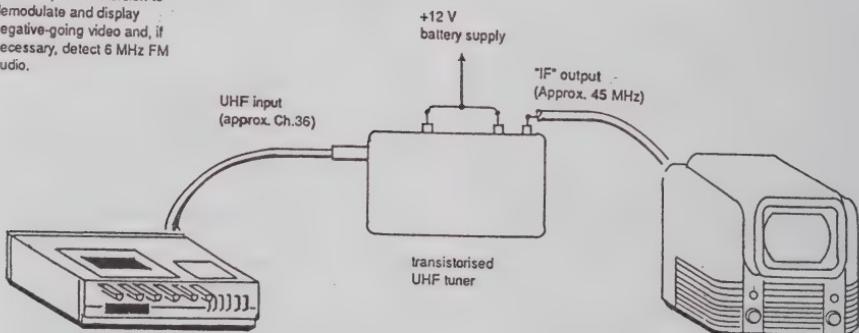
Isolating a CRT heater.



ABOVE: Boosting the heater of a CRT (page 21)

BETWEEN: 405 Lines at RF (UHF) from a VCR (page 38)

NOTE This is a hypothetical experiment. A 405 lines receiver would require conversion to demodulate and display negative-going video and, if necessary, detect 6 MHz FM audio.



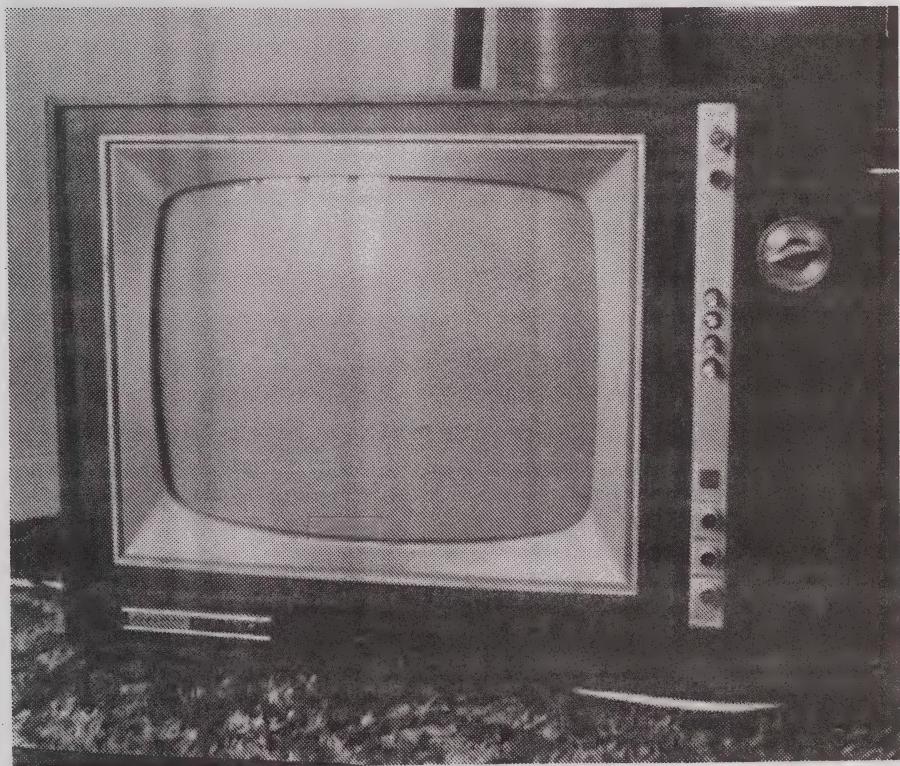
405-ALIVE ROVING EYE PRESENTS

TUBE TIME

With Desmond Morris

In response to those of you who have requested more pictures of sets in 405 Alive, here are some recent sightings of rare species from the Midlands.

A real rarity to start with. This lesser spotted GEC dual-standard colour set bolts from its hiding place, after being startled by our camera's lights. Moments later it was cornered and tamed with a de-gaussing wand. You'll be pleased to hear that it is in generally good health, although the 405-line sections have been cruelly disabled. Once this has been seen to, it will be released into the wild, where its mother, a 25-inch consolette awaits anxiously.



LEFT: Here's a real old lady of some 40 summers or thereabouts. And like most elderly ladies, she's sporting a rather fine hat, in the form of this delightful Telstar/Apollo occasional lamp. She's been identified by our expert spotters as an Ultra W721. Sadly, her eyesight is not what it was. The tube is all but exhausted, and is now only visible to cats, badgers, owls etc, at a distance of no more than 4 inches.



RIGHT: Here's another scarce sight. It's a dual-standard set, an Ultra 6638, in its natural habitat of various 60s oddments. We have a marvellous orange "rocket lamp" on the left, whilst on the set itself is a Dansette radio, tasteful illuminated "fish scene", wobbly blue glass ashtray, and one of those bobbly ornaments which no-one knows the name of. This is a fully grown 25 inch specimen perched on shapely legs which would put Angela Rippon to shame.

If you've sighted any near-extinct species of set, perhaps you'd like to drop 405-Alive your photo, where it will be scrutinised under a very intense scrute...

Photos and words by Steve James.

ELECTRON-HOLE THEORY EXPOSED AS FRAUD

The following is an extract from *Ham Radio*, April 1985, and should have been brought to our attention before now. Anyway, here it is, better late than never.

Have you been bemused and confused by the electron-hole theory? Do charges, valency bonds, and the 3/2-power law make you nervous?

A startling discovery by Mark Persons invalidates all of this claptrap! In a recent issue of *Radio World*, Mark reveals how electronic equipment really works:

For many years, young electronic technicians have been taught the "hole" theory of electronics. This theory explains how electrons move along conductors and semiconductors. The explanation has been good enough to satisfy or keep at bay anyone who might otherwise question the theory.

However, after a number of years working in the broadcast industry, I have come to realise the "hole" explanation may not be correct.

My theory, which has been proven time and again by personal observation, is that electronics works on smoke. Yes, that's right. I recently learned that every manufacturer encapsulates a certain amount of smoke in every piece of electronic component he builds. The smoke is what does the work.

You have probably noticed that a component will quit working when the smoke leaks out. I've documented this many times and it conclusively proves my theory. My theory sure beats the "hole" theory. I've never seen holes in a wire, and why don't electrons pour out of the end of the wire, if the wire is broken?

I say Mark Persons is RIGHT. I've seen smoke many times, but I've never seen an electron. Hats off to this pioneer whose discovery will be celebrated each April in the years to come!

Editor's note: In the previous issue I committed an error of judgment in allowing what could be construed as a personal remark to be included in an otherwise factual article. I have been asked to publish the following rebuttal by way of fair play, which I now do. In future I shall ask authors to stick to the facts and leave out commentative material, otherwise I'll be forced to start editing them more actively than at present!

Both now and on all occasions readers are invited to form their own opinions and to not regard judgments made in articles as having the endorsement of 405 Alive. In this article in particular I need hardly remind readers that the opinions are those of the author and not of the editor. Criticising other publications is something any publishers do at some risk. Normal service will be resumed after this article.

REVIEWING TV GRAPHICS

by Ron Jones

Ever since the first days of television back in January 1926, television graphics have played a vital role. Perhaps most viewers give scant regard for all the hard work and effort which has gone into producing the graphic design for any particular programme. They perhaps watch the multi-coloured revolving globe symbol on BBC-1 ahead of *Eldorado* and never ask themselves why there are two Australias on the planet's

surface but hardly any sign of Europe. I have often wondered about this since the globe was first introduced on February 16th 1991, but I still haven't come up with any sensible explanation!

The art of television graphic design covers a whole sphere of activities including Trade Test Transmissions, on-screen station identification symbols, individual programme logos, programme menus and trails, publicity, etc., etc. Examples of very early graphics are difficult to obtain, especially those used for John Logic Baird's 30-line transmissions in the late 1920s and early 1930s, although some have, amazingly, survived.

When we move into the early days of high-definition television on 405 lines, there is a distinct lack of information about graphic design work. Of course there were no video recording systems available to capture BBC-tv output between November 2nd 1936 and 1958 when the first video apparatus, called VERA, was shown "live" during a Panorama programme. There were of course film cameras available to record on-screen identification symbols, tuning signals and test cards but, alas, no-one seems to have filmed these for posterity. The earliest examples of BBC-tv programme graphics which I have in my collection from 16mm films are from the late 'forties although I have some earlier graphics and tuning signals available in print format. Perhaps some *405 Alive* readers may have examples of earlier television graphics?

With the introduction of BBC-2 field trials in 1963, a whole new generation of television graphics emerged on the much improved UHF standard with 625 lines. Then along came colour with a host of new on-screen identification symbols and programme captions plus, of course, the world-famous BBC Colour Test Card "F" with Carole Hersee and friend in the centre circle!

Next on the scene came satellite TV with a multitude of test cards, logos and, in many instances, appalling programmes. High-definition television (HDTV) seems to be the forthcoming attraction and there will, no doubt, be countless look-alike computer-generated station logos on the horizon.

Test Card Magazine

All the numerous facets of television graphic design are featured in a high-quality magazine called **TV Graphics Review**. The handy 20-page A5-size publication is written by enthusiasts for enthusiasts. Each edition contains a wealth of information, much of which has never been published elsewhere with such amazing attention to accuracy. One of the aims of **TV Graphics Reviews** is to help enthusiasts to build up a fascinating library of facts, general information and photographs which are unlikely to be found in any other publication.

TV Graphics Review not only features the latest forms of graphic design but each issue also includes fascinating archive material which is always enjoyed by nostalgia buffs such as readers of *405 Alive*. Authoritative articles cover the whole gamut of graphic design used over the past seven decades.

The quarterly magazine is published in March, June, September and December and costs only £7.50 per year. **TV Graphics Review** is not, repeat, not a "club" so there are no petty committee rules and regulations designed solely to suit the very odd quirks of very odd committee members! This unique publication is produced in magazine-form rather than an inferior, cheap-looking, "newsletter" format. Obviously a lot more effort has to go into producing a magazine of this quality but the end results of all the hard work are well worthwhile because **TV Graphics Review** has a very lively readership.

TV Graphics Review is produced by HS Publications. Formed as long ago as 1975, this highly respected company is known throughout the world for publications and videos associated with long-distance TV reception, (or DX-TV for short), British and overseas test cards, station identification symbols and BBC Trade Test Transmissions. Not only is HS Publications the oldest and most respected British company to produce material of this nature, but it is probably the only legally

registered organisation dealing with the subject of Trade Test Transmissions!

The proprietors of HS Publications are Keith Hamer and Garry Smith. Both are highly respected freelance authors and publishers and have written books and numerous articles about test cards and television reception for many journals including **Wireless World**, **Television**, **Short Wave Magazine**, **Television & Home Video**, **What Video**, **Radio & Electronics World**, **BBC Daytime Magazine** and the European Broadcasting Union's **Technical Review**. They began their DX-TV activities back in 1969.

Keith Hamer has been an avid enthusiast of BBC test card music ever since 1963 when he first realised that Test Card "C" was accompanied by superb music. Well over 3,000 pieces have been used by the BBC for trade test transmissions and he has just about completed the huge jigsaw puzzle of extremely rare recordings. Although there are well over 100 enthusiasts, Keith Hamer is the only person to have collected virtually all of the recordings without any breaks or lack of interest. Some enthusiasts were keen during the 'fifties, some through the early 'sixties, others the mid to late 'sixties, some the seventies and others took an interest in the early eighties but no-one, except Keith Hamer, has personally traced the development of BBC trade test transmissions covering the various test cards and all the marvellous music.

Some miscreants have, unfortunately, tried to mislead people into thinking that they have been devotees of BBC test card music for many years but in reality they have actually cheated by obtaining rare recordings from Keith Hamer by some very dubious methods. One objectionable character even took advantage of Keith's unfailing help over a 15-year period and then paraded himself as a long-time expert on the subject whereas in reality he was a mere novice! Nowadays, regrettably, genuine BBC test card music enthusiasts have to be very wary indeed of which circle of friends they associate with as there are inevitably some rotten apples in the barrel ready to spoil a perfectly harmless and fascinating pastime. When Keith Hamer started his collection back in 1963, there were no problems of this nature.

Over the past 29 years, he has helped many enthusiasts with their own collections and is always eager to hear from genuine enthusiasts. And that really is where **TV Graphics Review** is such a help to enthusiasts because it is produced by possibly the world's two most respected authors specialising not only on BBC-tv test cards and accompanying music, but also on world-wide test cards, television graphics and general broadcasting techniques.

If you would like further details about **TV Graphics Review**, or if you are interested in BBC test card music, then write to HS Publications, 7 Epping Close, Derby, DE3 4HR or telephone 0332-513399. A stamped-addressed envelope should be sent with any enquiry. This is also the address to contact for details about the new official British Roger Roger Club.

Unlike some organisations which merely dabble with the fascinating subject of BBC trade test transmissions, Keith Hamer will be pleased to hear from any BBC test card enthusiasts even if they do not wish to subscribe to **TV Graphics Review**; there isn't any of this closed circle nonsense with Keith. He will also be very willing to help any genuine enthusiast who requires more information about BBC test card music. This is a unique service of which Keith is proud and which he has freely provided for almost 30 years!

If anyone wishes to dispute any claims made in this article please send them direct to Keith Hamer, not to 405 Alive. This correspondence is now closed.

TV ON THE SILVER SCREEN: A POSTSCRIPT

by Brian Pethers

In Dicky Howett's feature "TV on the Silver Screen" (405 Alive, issue 15, p23) he says that CPS Emitrons had been phased out of Lime Grove before February 1957.

I joined the BBC in August 1957 and these cameras (with "improved" tubes with stabilising mesh) were still in use in studios D and G a year later (those in studio H were probably in the process of being taken out prior to the arrival of the IO colour cameras from Alexandra Palace).

I was then on what was known amongst the staff as "Smith's Circus" (after a member of personnel). This was a series of brief attachments to other sections of the television service in order to find out where one would like to settle down. One of these mini attachments was to studio D maintenance. At that time the cameras there were being converted from light control via a graded neutral-density filter wheel to the more conventional variable iris operation. This work was being supervised by an EMI field engineer by the name of (Quiller?). I recall that there were some teething problems with the servo motors reaching the end of the iris control range and then proceeding to unscrew the lens so that it fell out!

On another part of the tour, I did racks operation in studio G on a "Monitor" program, one of whose guests on that occasion was Geoffrey Johnson-Smith. I was put onto racks after my complete inability to drive a Vinten camera dolly had resulted in me ramming the studio wall a couple of times, after which the terrified cameraman said "no more!". The lens-hoods on those cameras used to receive a lot of punishment. Another regular programme from G was the Max Jaffa show.

I recall that there were very strongly held views on the relative merits of the CPS and IO cameras. The problem was that the differences were subjective ones. I think that on the control room monitor, the CPS pictures looked more "natural" but that the IO pictures had an extra "crispness" that allowed them to better survive the journey to the viewer with his poorly set-up receiver in non-optimum viewing conditions.

P.S.: Didn't "6.05 Special" come from Riverside studios?

SETTING THE RECORDING STRAIGHT

Dicky Howett looks at some early telerecordings

As reported in issue 14 of "405 Alive", there might exist an amateur 16mm film shot off-screen of the 1937 BBC TV Coronation broadcast. (I mentioned this alleged home TR first in issue 7). However, this footage, shot by a Mr. J.E. Davis was used subsequently in a 1953 BBC programme called "The Passing Show". Since then, nothing has been heard or seen of this vital footage (vital insomuch as hardly anything exists showing pre-war TV "on screen"). The BBC Film and VT Archive has no record of Mr. Davis's priceless footage. It might yet turn up. In the mean time, Windmill Road considers the likely existence of this film as little more than a myth. A curious attitude. [And demonstrably false! - *Editor's note*]

Not in the myth category, although hardly ever seen, is another pre-war telerecording made by EMI at Hayes of the Emitron system. This closed circuit test was filmed off the screen, with apparently, a stereophonic sound track! This unique

footage (nothing much to look at - just technicians fiddling about) was produced (or so I have been reliably informed) by the late Alan Blumlein. Blumlein (of stereo recording fame) was EMI's electronic wizard, and this film would seem to put him and his team, (demonstrably for 1936/39), way ahead of the whole electronic world.

The recent BBC2 series, "Black and White In Colour" (July 1992 - about the history of coloured people on TV) had some nice telerecordings from the 1950s and 1960s (including a vintage Z Cars from 1964). By way of exposition, a documentary made by the BFI trailed the series with clips and extracts. One of these was a 20 second clip of the American coloured singer, Adelaide Hall, performing live at Alexandra Palace. This film was claimed (with an overlaid caption) as "the earliest known telerecording" made in 1947.

Later in the week, the full extract (six minutes) was broadcast. Again, the Radio Times repeated the "1947" claim but qualified it as ".....one of the earliest recordings.." Doubt had now crept in. Donning my Researcher's hat, I set about hunting for the facts. According to the "Guiness Book of TV Facts and Feats" the very earliest telerecording was indeed dated 1947. This was made by Philip Doré on 9th Nov. 1947, of the Remembrance Day ceremony at the Cenotaph. Actually, the BBC Film and VT library holds earlier footage, but these items are only closed-circuit or brief test shots, not complete programmes, as transmitted. (Examples of early telerecordings pictured as frames from 35mm prints can be seen in the excellent 1950 book "Adventure In Vision" by John Swift).

Eventually, telerecording by the BBC, using an adapted pre-war Mechau televine machine, was "perfected" in 1949. And it was in 1949 that the Adelaide Hall recording was made, *not* 1947. This test recording was from a show called "Old Songs For New", transmitted from AP on 6th September 1949. The film reveals a charming and lively performance from Adelaide Hall, shot continuously over six minutes from one angle by a single Emitron on a dolly. (Not many six minute shots these days. Even with improved picture cutting and mixing systems, camera-work in the 1940s and 50s was glacially slow). Throughout, Eric Robinson's orchestra can be seen, albeit dimly in the background. The picture quality of the recording is as you might expect for the time, but the word "perfect" would be inappropriate.

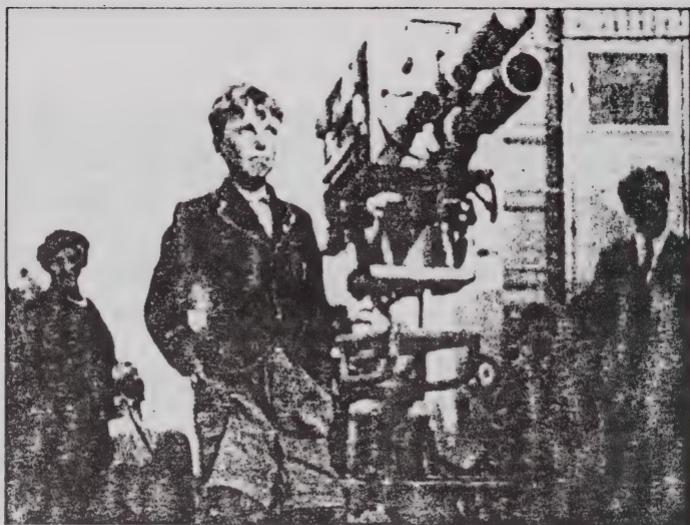
We in our house always groaned when a telerecording came on, mainly because the picture quality was, frankly, bloody awful! Also, the recording-line structure and the TV set-line structure would "mesh", causing the picture to "herringbone". For really duff telerecordings, the worst picture quality of all came from Eurovision via an optical standards conversion. Herringbone and lateral movement blur. Ugh! Apart from Equity objections to recording *per se*, the poor quality of recordings (when viewed on home sets - always the weak link in the broadcast chain) probably counted against its use as a production tool. Later, when 625 came along, old 405 recordings looked, all of a sudden, quite decent. This was mainly because 625 TV sets were better for detail and the "meshing" problem had vanished. Also, by that time, nostalgia had set in.

[AP = Alexandra Palace (BBC studios and transmitter site). BFI = British Film Institute. TR = BBC abbreviation for telerecording. TK (*tele-kine*, because the "correct" pronunciation of cine is kine) is televine (35mm or 16mm film) and TJ stands for a slide scanner (because an early slide scanner product was the American TeleJector).

Ray Herbert writes:

The comment regarding the first telerecording in 1937 is incorrect. The Baird company were making telerecordings at the end of 1934. Samples of film showing 180-line and 240-line recordings were shown to the Royal Photographic Society in 1935. Some original frames are at the BFI stills library, donated by Baird cameraman Alan Lawson.

(Ray did in fact work for the Baird company, so he should know!)



The schoolboy Dicky Howett tries the cameraman's angle

SOUTHEND-ON-TV

Dicky Howett recalls some seaside moments from the early days of television

Television in the 1950s was all-live. And being all-live it had to have regular doses of action and adventure. Outside broadcasts provided some ready-made thrills and, in those years, a favourite thrilling venue for both BBC and ITV was Southend-on-Sea.

Never a year seemed to go by without Southend Pier or its carnival being featured on Saturday afternoon telly, interspersed between the usual diet of wrestling, showjumping and boat racing.

In 1950, the BBC had Richard Dimbleby demonstrating a sea rescue off the end of Southend Pier. The nation held its breath as a weighty Dimbleby was seen suspended in a bosun's chair, dangling over a windswept sea. Then, on cue, he was hauled from a yacht to the waiting lifeboat, thus providing instant thrills — would the bosun's chair break? Would he fall into the water? — as well as the double bonus of a few hours of extremely cheap television.

On the basis that any old excuse would do from a bank holiday to a coronation, the TV companies would rush instantly, van loads of cameras and miles of cable at the ready, to any likely festive vantage point.

But not too far from London. Nationwide television was still a few years away and ITV was several companies short of a network.

The actual subject matter seemed not to matter. Everything was new and it was all grist to the TV mill. Indeed, for years, a Southend seafront gypsy fortune-teller had a sign displayed which read proudly: "As featured on BBC television". Doubtless the clientele were suitably impressed as they crossed palms with silver.

But Southend carnival provided the ultimate black and white TV attraction. In 1956 ATV transmitted the festivities, setting up their cameras and control vans beside the old swimming pool at Westcliff.

Included in the day's programme was a beauty contest (typical ITV) from the pool. Later in the afternoon, a proportion of the carnival procession was televised. Two cameras made by the Cambridge company, Pye, were used. One mounted on a dolly beside the road and the other, using the latest zoom lens, on a gantry.

What all these Southend programmes actually looked like, I have only fragmentary recollections. Even in those days, our little 9 inch made-in-

Southend Ekco television set was working overtime!

Lasting impressions are that these outside broadcasts were fraught with technical and artistic problems. Cameras would focus on the wrong item or break down at critical moments. Commentators would lose their sound-leads or microphones. Interviewees would freeze-up in panic and forget their own names. Strange and inexplicable pauses proliferated. Everything over-ran. And it always seemed to be raining.

No recordings exist of those 1950s Southend outside broadcasts. They were not exactly historic, nor considered at the time worthy of any sort of archive preservation. But, oh to be able to see them now!

My memories of the 1956 Southend carnival are reinforced by the photographs my father and I took of the ATV technical gear. But I shall always recall fondly, the remark made to me by an ATV cameraman who was photographing the carnival. As a camera-mad 12-year-old, I confessed to him that wanted to be a TV cameraman when grew up.

"B---- off, can't you see I'm working?" he muttered helpfully.

IN THE WORKSHOP

PHILIPS G6 DUAL STANDARD

by Brian Renforth

I have recently taken delivery of a Philips G25K502 dual standard colour receiver dating from 1967. It employs 21 valves, 17 transistors and 46 semiconductor/rectifiers, all drawing some 400 watts from the mains!

I well recall seeing one of these sets when I was little: how I itched to press the on/off button now! Up came a lonely picture after a bit of a warm up. This is *real* colour television!

First impressions were very daunting, finding myself falling asleep over the manual several times. I understand this is quite normal, however! Having since become accustomed to it I'm feeling a lot happier now.

Being a hybrid set, restoration would be on a sort of "hybrid" basis, wouldn't it? Some areas appear to be in excellent condition whereas others, such as around the line timebase area, have required total rebuilding. A major weakness, in addition to the usual "Philips" trouble, is the area holding the EY51/Focus chain and desaturating choke - it's vulnerable to a burn-up. This had already been attended to with the focus diode changed to an EY86 and holder with the focus resistor chain mounted in mid-air. I wasn't happy with the desaturating choke being mounted directly above the line timebase valves, however, so I've repositioned this vertically roughly where it originally lay and as far away from the valves as possible.

The system switch sliders on the timebase panel had been involved in a burn-up, destroying the sliders and burning a hole in the panel. No problems filing away the charred area, fitting a switch from a scrap chassis

and bridging the gaps with tinned copper wire. A desoldering iron is an excellent investment for this type of work. The sliders, now complete, do appear to be on the flimsy side when compared to those used by other manufacturers.

The first valve in the heater chain is the PL509 line output valve (incidentally, whatever happened to the PL505?). No switch-on surge provision is incorporated in these sets so I feel it's essential to provide this in the form of a thermistor - PL509 valves are not cheap!

Up to now I've generally tidied the set. This will make fault finding and component replacement far easier now one has become familiar with the chassis. I found that one or two connections to the line output panel conflicting from that given in the manual, perhaps due to modifications. To be on the safe side I've reverted these as per circuit. It's most likely that the line output transformer will be faulty, but I have a spare which may be OK. Perhaps also the A63-11X CRT as well. Replacements shouldn't provide any problems, assuming spares can be obtained. As a last resort, tripler conversion may be necessary.

Some interesting features include an "Auto White" relay, mounted on the CRT base panel. This is activated on 405-line and 625-line monochrome transmissions providing a bluish tint as given by monochrome tubes. It's fascinating how this is linked to actual transmissions: Channel Four, for instance, usually transmits black and white material switched to colour! The convergence box is accessible by pulling out the drawer below the front of the screen - a wonderful feature.

The usual controls plus integrated tuner have the addition of three push button switches for on/off, tone and colour off: the "status button" as I understand Philips called it! This is also not linked to the auto-white relay. The tuning meter (625-lines only) is another nice little extra.

Costing 305 guineas in 1967, the sets gave its viewers colour on BBC2 only, BBC1 and ITV remaining 405-lines VHF until November 1969 - or until 1976 to include the Channel Islands who didn't even have BBC2 till then! Four models were produced under the Philips banner: the G25K500/1/2, also its big sister the Stella ST2500 and uncle Alba's TC1525 (similar to the G25K500).

I hope to have the set working pretty soon, so watch out for the next instalment, Converging by Test Card "C"!

[Continued in issue 17].

THE IMPOSSIBLE DREAM? MAKING 405-LINE SETS WORK ON 625 LINES

by Malcolm Burrell

Occasionally I covertly re-read back issues of 405-Alive as a means of escapism whilst at my desk!

One problem of which I read related to a person who wished to replay a 405 lines videotape recording through a single standard 625 lines TV. This is sometimes possible and probably requires only horizontal (line) hold adjustment. It is usually possible to increase the value of one of its series resistors if correct locking is out of the control range on older 625 lines monochrome receivers.

I'm a little sceptical since most line output stages used third harmonic tuning and will almost certainly thus operate outside their design limits at 10.125 kHz, perhaps causing excessive EHT, etc.. If an elderly 625 lines set is to be used permanently in this way it might be desirable to check that the boost voltage is within specified limits and adjust the appropriate control accordingly. By displaying a 405 lines test card, adjustments could then be made to ensure correct picture geometry with, perhaps, an increase in the value of the "S" correction coupling capacitor to the line deflection coils.

THE PRINCIPAL DOMESTIC VCR

PROBLEM?

The RF output of most video recorders is at UHF (around Ch.36) with negative vision modulation (instead of positive) and FM sound (instead of AM). All 405 lines transmissions in the UK were on the Bands I and III VHF channels. Feeding an RF output from a domestic video to an old 405 lines-only receiver would therefore require either changing the internal video recorder modulator to one designed for VHF, or feeding the audio and video outputs via a suitable external 405 lines standard VHF modulator into the receiver. Various modulators have been mentioned in these pages.

It is also important that the modulator output be "positive-going" video with 3.5 MHz AM sound.

There is another minor problem due to the recorder "drop-out" compensation being inappropriate for 405 lines but this simply manifests in the occasional white "blip".

DIRECT VIDEO/AUDIO INPUT TO A 405 LINES RECEIVER?

On occasions many years ago I fed video and audio experimentally into a receiver. This can be very dangerous since most 405 lines sets, when

switched on, have a chassis which is connected to one side of the mains supply. The only fairly safe method to accomplish this task is to operate the receiver via a large, expensive mains isolation transformer. Some video pre-amplification might still be necessary.

WHAT ABOUT RF (UHF) PLAYBACK OF 405 TAPES ON DUAL STANDARD SETS?

The criteria (requirements)

The receiver must:

1. Detect FM sound
2. Demodulate NEGATIVE vision signals
3. Possess a UHF tuner
4. Possess a line timebase capable of operating on the 405 line standard at 10kHz.

Most dual standard receivers meet these requirements and can be adapted often by various link adjustments or simply, in some instances, disconnecting the timebase system switch. Examples are the GEC BT455, the GEC BT2000, most Philips dual standard sets from the sixties, the Bush TV125 and TV161 series. Probably the Thorn "850" could be treated in a similar manner. The IF system switch is left in the "625" position whilst the timebase switch is held in that for "405". [Editor's note: the highly desirable Sony TV9-90UB 9"-screen portable is ideal in this respect. You just push in both the UHF and the 405 buttons and there you are!]

This approach has the advantage that the modification is minor and does not appreciably alter the character of the receiver.

There is a disadvantage in that although the image is composed of 405 lines and accompanied by the audibility of the inevitable line timebase whistle, the image does not have the characteristics of positive modulation which tended to accentuate the highlights.

Most dual standard receivers were fitted with two horizontal hold and two contrast controls. With this

mode of operation only the "405" line hold and the "625" contrast control will be effective.

MODIFY A 405 RECEIVER FOR UHF NEGATIVE MODULATION?

This is not impossible but purist collectors might not favour the concept. Roger Bunney published several early articles on modifying the Bush TV62 for VHF 625 DX reception (Practical Television). Often reversing the connections to the video detector diode then experimentally decreasing the video output valve cathode resistor should solve the "negative modulation" problem. Of course, the line timebase would be left in its "405" state. You could then fit a UHF tuner or try the following experiment.

To provide a VHF RF feed from the UHF RF output of a video recorder might be possible using a simple makeshift converter. If you have a high gain, transistorised, rotary UHF tuner it could be battery-powered and fitted externally. RF from the video recorder is fed normally to this tuner and, when tuned to the video recorder modulator, the "IF" output from it is fed as an "aerial input" to the receiver since the IF output frequency isn't drastically different from the original VHF Channel 1 vision frequency of 45 MHz. Some internal bending and tweaking to the UHF RF and mixer tuning vanes might be required to maximise its gain, however.

Note: Many years ago I was required to service receivers which received cable reception of BBC2 on channel 5 VHF. I found this concept at least provided a workshop image - that was in the days of valve UHF tuners. Of course the conversion created "sideband" problems but since the output from a video recorder modulator is double-sideband this should not arise. Unfortunately, the 405 lines receiver would not correctly detect the 6MHz FM audio. Sound would need to be tapped from the recorder A/V socket and fed to a separate amplifier/loudspeaker.

I emphasise this is simply an

IDEA and has not been tried in the present context!

CONCLUSION

I would stress that collecting receivers is a hobby in the context of the magazine. I personally would prefer that vintage TV's be left in their original state but a hobby should be enjoyable so if you wish to modify YOUR receiver, its up to you! Besides, I've seen the occasional "custom" Ford Upright, so....

NOTES & QUERIES

Mrs Mills and Mrs Miller

Tony Clayden advises that these two ladies were definitely not the same person! Mrs Mills was British and played the piano. Her music was mainly pub songs and she made many television appearances as well as a number of record albums of singalong music. She was quite a large, jolly sort of lady!

Mrs Miller on the other hand was an American singer who could not sing in time or tune. The result was really rather excruciating, in fact so bad it was good (a little like the Portsmouth Synfonia, if you remember them).

Presentation items

Steve James asks what visual material went with Johnny Hawkesworth's lively music on LWT's start-of-day sequence. Andy Marriott was watching the BBC's recent TV Hell programme very carefully and reckons that the Anglia Television "revolving knight" shown as Anglia's ident was *not* the sequence normally used by Anglia. Any ideas? And we'd like to make a definitive list of the ITV stations which used a film of regional places of interest in the start-of-day sequence. Southern, Westward... and any others? Replies to 405 Alive please.

ON THE FOLLOWING PAGES

THE REPO MEN STRIKE....

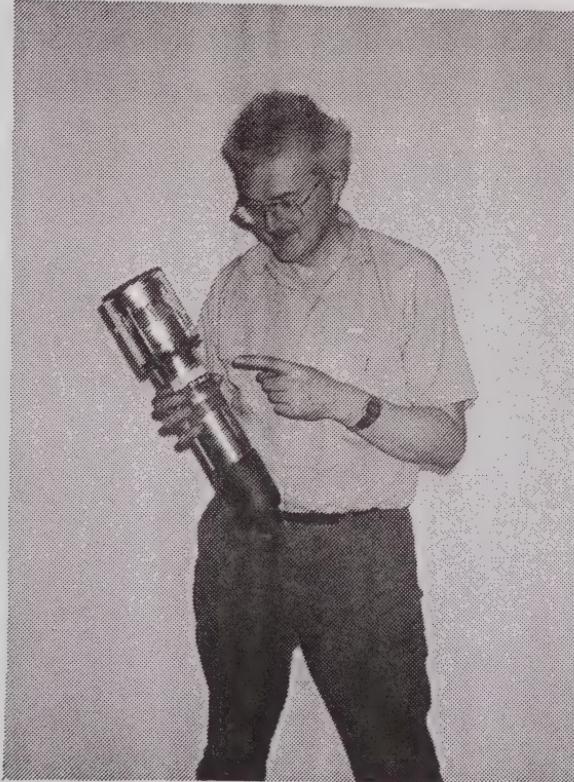
They're rough, they're tough and they don't go away empty-handed.

Yes, every now and again an elite group of trained professionals make a sortie on snatch-squad missions to recover historic TV equipment in danger of annihilation or even worse fates.

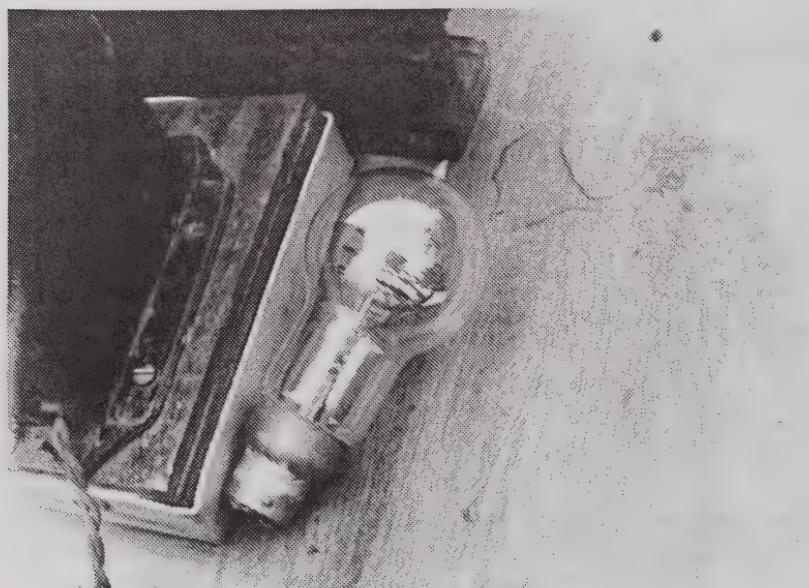
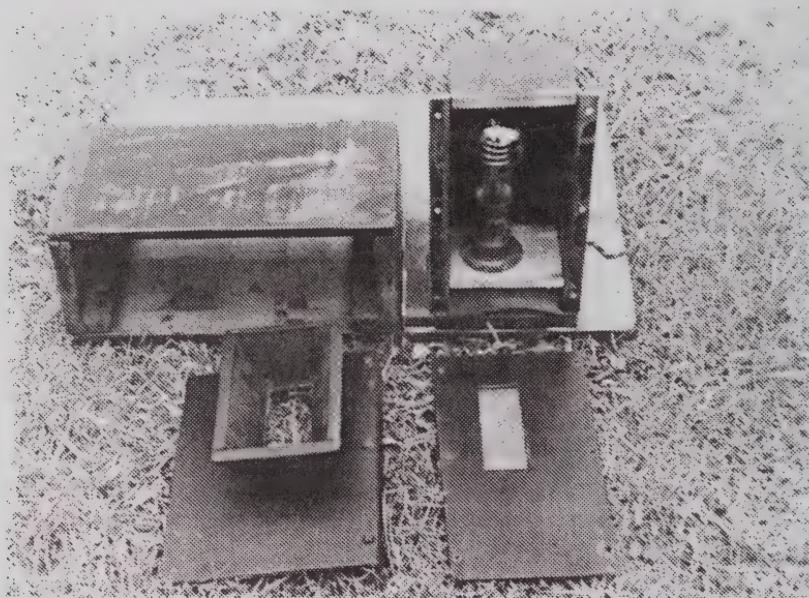
Fig. 1: You'd never believe that a whole Marconi Mk III image orthicon camera chain could fit inside a Citroen estate car. It's rather like the TV Times... I never knew there was so much in it.

Fig. 2: Prize capture - an unused EMI 3-inch image orthicon tube. Brian Summers G8GQS wonders who'd willingly use those wimpy little CCD chips when you could have a real camera tube like this.

Thanks to Ted Gilbert G8TMM in Harpole for having the good sense to hand over his camera without putting up any serious resistance.



Two shots of Dave Hooper's "new" TV receiver. Hands up those people who would have walked straight past something like this in a flea market!



PICTURES OF THE OUTER WORLD

by Donald Wray

One of the first jobs I had as a design engineer at Dollis Hill was to devise equipment for using ordinary telephone lines for television outside broadcasts. From this was born the portable equaliser-amplifier: Tom Kilvington and I were the joint patentees. I later designed gear for TV transmission over coaxial cable and microwave links and even attempted (spectacularly unsuccessfully) to record TV programmes electrostatically on a rotating glass disc long before the Ampex tape machine came along.

For several years I spent my days in the laboratory working on equipment design and my evenings at the sites of outside broadcasts trying to make the wretched stuff work under live conditions. This doubly-devoted life had its compensations: I had privileged spectator positions at Test matches, Wimbledon, the Boat Race, Wembley Stadium spectacles, the 1948 Olympic Games and much more.

The Olympic Games were particularly memorable. Ian Orr-Ewing was the BBC producer on site and I - a horny-handed engineer - was amazed at the way these superior artistic persons swore and blasphemed at their staff and colleagues. I was also surprised to find that the sports commentators had forecast most of the winners of the field events and so were able to practise their commentaries in advance of the games with the cameras panning along empty tracks. But everyone made one mistake. It was widely believed that Prince Philip himself would run into the stadium carrying the Olympic torch and a great deal of purple prose had to be scrapped when that Greek hero arrived in a more mundane fashion.

Our specially-provided coaxial cable ran from the stadium control room along the walls of the Royal

Tunnel into the Wembley street outside and thence via Willesden to Museum Exchange and Broadcasting House. All went well until (of course) the very morning of the opening ceremonies when our cable went faulty. Our test equipment indicated that there was a bad joint in the Royal Tunnel. I knew its location and galloped off to put it right - only to find that the whole of the inside of the tunnel had been covered in magnificent purple velvet. There was no time for delicacy. I fumbled along the walls until I found the joint and cut a large flap in the velvet with my pen-knife. I frantically replaced the screw connections and all was well again. I do hope their Majesties were not too distressed to see that jagged flap in the royal purple when they made their stately entrance.

Our first Boat Race broadcast also had its share of incidents. We had persuaded one elderly lady to release her phone line from her peaceful riverside home so that we could equalise it for TV transmission but she became pretty upset when the BBC filled her garden with bulky cameras, noisy generators and rumbustious personnel. Came the day of the Boat Race and she refused to let us in. Fortunately her daughter lived nearby and she, by dint of screaming through the letter-box, was able to get her mother to relent on condition that henceforth the BBC crews would be silent as mice.

Our control point for the Boat Race network was in what was then called Museum Exchange (now engulfed in Telecom Tower) where we had put up a rack of terminal and test equipment and some TV monitors in a corner of the operators' switchroom.

The cox of one of the crews was a certain Anthony Armstrong-Jones who, even then, had acquired a certain

fame. As the preparation for the race got under way the operators crowded around the monitors (TV was still something of a novelty in those days). In a pause between the "Aaah!" and "Ooooh!" noises I loftily remarked that I supposed you girls were turned on by these beefy fellows with their strapping shoulders and bulging biceps. "Oh, no!" said one girl indignantly, "I'm not interested in that sort of thing at all." "Oh, I see," said I without thought, "I suppose you're much keener on their cox."

To this day I blush at the memory of that unfortunate choice of words.

As television spread across the country so, figuratively speaking, did I, working on a variety of links stretching from the Isle of Wight to Glasgow. These were all fully-engineered microwave radio or coaxial cable links and took many months to install and commission. But when we were suddenly faced with the requirement to bring television to Belfast in time for the Coronation, there was no time to do the job properly. Our link consisted of an inverted-V antenna and a receiver on top of Black Mountain, near Belfast, picking up the broadcast signal from the Scottish transmitter at Kirk o' Shotts about 130 miles away. The receiver was connected via a cable running down the mountain-side to a transportable BBC transmitter. Much of our receiving equipment had to be carried by the local PO engineers in back-packs up the mountain to our tiny hut on the crest.

It was not difficult to distinguish between the Loyalist and Republican areas of Belfast during the Coronation celebrations. The streets of the former were so thickly hung with bunting that sunlight could scarcely break through whilst the lack of flags in the latter was so absolute as to seem insolent. At night the Lambeg drums rolled and growled until the knuckles of the drummers were streaming with blood.

I returned home a few days before the Coronation confident that the installation was working nicely, only to

be told there were rumours that the IRA intended to blow it up. I was ordered back again accompanied by a spare set of equipment so that, with the last breath of my mangled remains, I would be able to repair whatsoever had been damaged. By now high-octane Irishism was setting in. The RUC had introduced a pass-card system and I, the only person with spare equipment and an intimate knowledge of the installation, was debarred entry because I didn't have a card. It took a day to sort that one out.

I then found that our coaxial cable down the mountainside from our hilltop receiver to the BBC transmitter, which had been neatly buried and grassed over, was being patrolled by the RUC day and night by stolid constables laden with guns, spotlights and walkie-talkies. Even a blind IRA man could have plotted the course of our cable by listening to the path of the rich Irish curses. It took all my tact to convince the RUC that our little engineering enterprise would be far safer without the benefit of their protection. It's not the sort of message a policeman likes to hear.

After the Coronation came the celebrations. The Belfast pubs were supposed to close quite early and not open at all on Sundays. How did it happen, then, that one came across so many cheerful prostrate citizens dotted through the streets and far out into the country; even on Sundays? The answer was: club membership. To join a club one went along a street where there were many brown wooden doors punctured by wooden hatches. One would rap on the door and the hatch would fly open.

My first essay was unsuccessful. The hatch opened and a voice said: "Are you an ex-serviceman?" I thought briefly about the terrifying consequences of giving the wrong answer to this question and decided the most prudent response was "No!" The hatch shut with a conclusive bang. We tried again a few doors along the street. This time the voice through the hatch asked: "What are you," "An engineer" I

replied. And I was in and able to study at first hand how a skilled barman cuts off the top of a Guiness with a scapula.

Everyone who was involved in those pioneering days has a story to tell about the horrors and delights of live television.

Let me conclude this section by telling you mine. I was in an Alexandra Palace control room looking down on a small studio where a superior lady was teaching the plebs how to cook. She extracted a large object from the oven and laid it on the table.

She beamed at the camera: "I'm now going to lift off this basin and you will see a beautiful firm and succulent pudding." She slowly lifted the basin and a hint of anxiety touched her noble features. She continued to lift even more hesitantly but it was no good: the pudding flowed out from under and distributed itself over the plate in an even layer of gunge. The producer in his eyrie yelped with horror. But our lady, the cook, with true British pluck, was not dispirited. She smiled bravely and said "Well, even the best-laid plans sometimes go a little awry. I am now going to show you how to make a light sponge. Take a cake tin 6 inches by 4 inches...."

The producer turned to his girl assistant. "Quick!" he screamed. "Run down to Lyons and buy a cake 6 inches by 4 inches..."

Innocent days.

The author has led a long and distinguished career in the Post Office and British Telecom. Dollis Hill is the name of the GPO's old research station, the predecessor of its present establishment at Martlesham Heath.

A TELE TALE, or A TRUE STORY FROM THE FIELD (sorry, FRAME)

by John Wakely

As a very young repairman in 1963 I worked at a small shop that carried out repairs and sold reconditioned TVs. Being too young to drive, I was sent on all the "only needs readjusting" calls by foot.

One afternoon a little old lady entered the shop and requested my help with her TV. I was sent across to a very dark old house overgrown with laurel bushes and shrubs. I knocked on the door and was shown into a very dark front room. In the corner of the room amidst the gloom stood a very old Ferranti 9" console, I think model T138. I plugged the 15 amp plug into the wall socket and switched on. Nothing... . Then the odd bit, I tried to turn the set around to remove the back but it would not move!

I gave it one good pull and it broke free from its mooring. What had happened, you ask? The answer was simple. The mains rectifier valve had developed an internal short. The resulting excess current flow had boiled all the wax from the mains transformer. This had run out of the bottom of the cabinet and had solidified, sticking the little castors to the lino floor!

I showed her the resulting mess. "Perhaps you can get the other one going," she proclaimed. I was directed to the dining room, and lurking in the corner was the hated HMV 1824 series console complete with 14-position ITV converter. I switched it on and after what seemed half a lifetime a very poor, dim, unstable picture appeared with very little sound. Yes, you have guessed it. Most of the IF decoupling capacitors were O/C together with no end of other faults. I suggested she called at the shop and select one of our reconditioned models. An Ekco T330 17" was carried across to her house,

and like all those models produced a splendid picture.

All ended on a good note. I cannot remember collecting the old sets, so if any 405 Aliver has them, I would like to restore the Ferranti - but please keep the HMV!

SONGS OF PRAISE

by Brian Pethers

I should imagine that we all must have heard, perhaps more than once, Adele Dixon singing about television's "magic rays of light" at the official start of the BBC television service on 2nd November 1936.

But did you realise that a similar hymn of praise was written extolling the wonders of colour television?

At a BVWS swapmeet I picked up a copy of RCA's & NBC's 1953 petition to the FCC for "Approval of color standards for the RCA color television system". This was the system which after some mathematical tidying up became the NTSC system.

An appendix to the book contains "A survey of audience reactions to RCA color television conducted in New York City, October 9-13 and 15-19, 1951". The audience in question saw a short musical variety entitled "It's a World of Color".

In this the musical star Nanette Fabray performed the title song. To quote the closing verse:

"It's a world of color
So just be happy
The clouds disappear and
Rainbows are here to stay.
It's a big wide wonderful
world of color
It's a world of color today."

Maybe it sounded better than it looks! But how did it sound? There would have been no videotape (it was another two years before RCA demonstrated magnetic recording of monochrome [$\frac{1}{4}$ inch wide tape] and color [$\frac{1}{2}$ inch wide tape], both at 30 feet per second).

There may have been a film recording (monochrome?) made, or alternatively the show may have been filmed as the 1936 BBC event was. I wonder if such a record exists in the archives of NBC? Does 405 Alive have a contact "over there"?

BVWS...	British Vintage Wireless Society
FCC ...	Federal Communications Commission
NBC ...	National Broadcasting Company
NTSC ...	National Television Standards Committee
RCA ...	Radio Corporation of America

INFORMATION CORNER

On the rear outside cover we list some other publications and societies which cover similar interests to ours. Why stop there, though? We could list all manner of clubs and organisations if we knew about them or thought them appropriate.

This time we'll confine our attention to a subject which many readers have said they are interested in, namely music.

ROBERT FARNON SOCIETY

The Robert Farnon Society was founded in 1956, and its aims remain to publicise the work of Robert Farnon in particular and similar musicians involved in light and film music. At least four magazines are published each year, and London meetings are held in April and November. Free sample magazine available from the Secretary , David Ades, Stone Gables, Upton Lane, Seavington St. Michael, Ilminster, Somerset, TA19 0PZ.

VINTAGE LIGHT MUSIC SOCIETY

This society exists to bring together everyone interested in the many kinds of light music represented on 78rpm gramophone records. Annual subscription £2.50, quarterly magazine. Secretary: Stuart Upton, 4 Harvest Bank Road, West Wickham, Kent, BR4 9DJ.

MEMORY LANE

A nostalgia magazine covering the popular music and jazz scene of the 78rpm era. With the accent placed on British dance music of the 30s and 40s, it is eagerly read by nostalgia enthusiasts worldwide. Published quarterly. Sample copy and subscription rates in return for two first class stamps (or IRCs). Memory Lane, 226 Station Road, Leigh-on-Sea, Essex, SS9 3BS.

FROM SILENTS TO SATELLITE

The journal of film and TV music. Details from John Williams, 1 Folly Square, Bridport, Dorset, DT6 3PU.

IN TUNE

A magazine for those who are in tune with the music of the years 1935-1960. Each issue is crammed with information on the record starts of the period, plus reviews and new releases. Editor/Publisher: Colin Morgan, 12 caer Gofaint, Groes, Denbigh, Clwyd, LL15 5YT.

NZ FILM MUSIC BULLETIN

A magazine for film enthusiasts published quarterly by Colin Adamson, 35 jenkin Street, Invercargill, New Zealand.

IEAM ENCORE

Official journal of the Institute of Entertainment and Arts Management. Editor/Advertising Manager: Peter G. Foot, 240 Tolworth Rise South, Surbiton, Surrey.

REFERRALS

Several of our readers have hidden talents and have indicated they would be prepared to answer readers' questions. We'll add to this list from time to time (as people offer their services). Remember to include a stamped addressed envelope with any letter and allow time for a reply. If ringing, please do so at social hours!

MUSIC, including test card music, mood and background music.

Tony Clayden, 64 Exeter Road, London N14 5JS. Tele: 081-361 8881.

TV SERVICING, identifying obscure early sets.

John Wakely, 108 High Street, Colliers Wood, London, SW19 2BT.

David Boynes, 12 The Garth, Winlaton, Blaydon, Tyne & Wear, NE21 6DD. Tele: 091-414 4751.



PINEAPPLE VIDEO

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This new product from Pineapple Video uses the latest in frame store chip technology to provide a sophisticated product at a very reasonable cost. Available either as a complete boxed unit with mains power supply, or just as a PCB card, the converter provides a fully interpolated CCIR standard 405 line output waveform. The PCB card requires just an unregulated 7-9 volt supply and provides a 1 volt 75 ohm output from any normal 625 line input signal.

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- * Full interpolation from 625 to 405 lines - no lines dropped.
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- * 8 bit digital signal processing
- * Output sampling rate of 10Mhz ensures frequency response in excess of 5Mhz
- * Stable output even with VHS recorder inputs
- * CCIR spec 405 line sync pulses
- * Available as a single PCB (approx 6" x 3") or boxed with mains power supply
- * Low cost - around £250.00 + vat for PCB version

Available mid-December

GETTING RADIO 2 ON YOUR VINTAGE RADIO

Easy! You just plug your F.M. tuner into the radio. Well, if this is the sort of sound that you want, fine; but it does not sound very vintage to us! (Try it, you may be surprised at the results; Edwin Armstrong would have loved it.)

So what if you have no pick-up socket? Well, Marconi did it; so can we. All you need is a nice quiet spot on the medium waveband, and a small transmitter. An R.F. signal generator will do.

Oddly enough, airwaves are at a bit of a premium now, so armed with your trusty signal generator, what are you rewarded with? Whistles, and lots of them.

There is a solution; use a defined frequency. Broadcast station spacing is 9kHz, so any multiple of this is a valid one for use. If you choose your frequency carefully you can minimise interference from other stations, as it is somewhat pointless to try to swamp a National or a strong local.

For London, 1332kHz is a good choice of frequency as the nearest station (geographically) is Hereward Radio in Peterborough, but of course if you live near Peterborough you will need a different frequency.

So, we need at least two different frequencies for our little transmitter, and these should be as stable as possible. A crystal oscillator would seem to be the ideal solution, but these frequencies are not available off the shelf and you may need several of them.

Now, getting a crystal made to spec. costs about £10 each- this is a great amount when you consider the possible number of different frequencies required.

Another solution presents itself; the Frequency Synthesiser. This circuit works by multiplying a common reference frequency (9kHz in our case) by a factor to give the required result. So for 1332kHz we need to multiply by 148; a few simple changes would allow us to generate 1404kHz for example. The 9kHz comes from dividing the output of a standard crystal oscillator costing only a few pounds, so we now have a versatile, cost effective solution.

Meanwhile, what about the fidelity? Our radio will still sound too "good"; we have too much "treble", or "top". So the final step we have to take is to filter the audio.

Now, theory states that the audio should have a bandwidth of 4.5kHz to prevent co-channel interference; in practice, up to 6kHz is transmitted by many broadcasters, and who are we to argue?

So now we have our small transmitter: it does not want to be too powerful or the D.T.I. will get rather upset. We have found that an output of a few milliwatts into a few feet of wire is adequate to cover a house or museum.

Having talked a great deal about the transmitter, we have not said a great deal about the receiver: indeed, little does need to be said. We think it a good idea to provide push-button selection of 4 stations, so that you can be ready for the departure of Radio 3 on the 28th February 1992, or you could have Jazz FM, or whatever takes your fancy.

Or how about your own station? We provide an external input so that you can play your old records (or even new CDs) on your steam radio! Normally the input is tailored to match a Compact Disc player, but this can be altered to suit your requirements at no extra cost if you tell us at the time of ordering.

We have also provided a filtered audio output for monitoring (it will drive a pair of high-impedance headphones, e.g. those made by Sennheiser) or for recording onto cassette with that authentic Vintage sound!

It goes without saying that we believe in a solid, well-engineered product: the unit is built into a two-tone painted steel case which should prove unobtrusive and hopefully sturdy enough to withstand the rigours of the workshop!

From these notes we hope that you will realise that a great deal of thought has gone into this unit and that at £110 (including postage and packing) it represents real value for money. However, if you can collect it from the address below, naturally we will waive the postage and packing charge.

Incidentally, each one of these units is made to order, and we will customise it to a certain extent, albeit at extra cost, to your requirements: however, if you want it yesterday then this is not the unit for you!

Ordering details

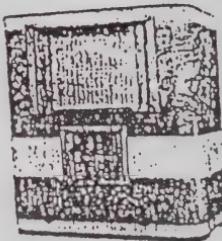
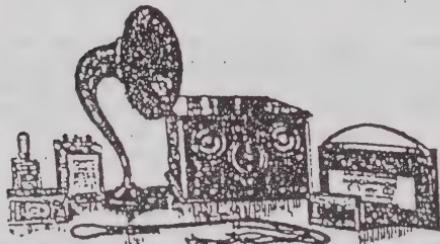
Please send a cheque for £110 (price including postage and packing) to:

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Please make cheques payable to *D.J.Grant*.

THE LEADING MAGAZINE FOR ALL VINTAGE RADIO ENTHUSIASTS

The Radiophile



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As a radio enthusiast, you may already have heard something of our magazine. Why not sample it for yourself? We believe that you will agree with our readers that it is by far the best of the publications dealing with vintage radio with its authoritative yet friendly articles and its devotion to the "feel" of the period it deals with. *This is not a "coffee-table" magazine with merely superficial appeal.*

The Editor, Chas.E.Miller, has been engaged professionally in radio work since 1948 and in technical journalism since the early 1970's. His book *A Practical Handbook of Valve Radio Repair* is the definitive work on the subject. The various writers who contribute are also well qualified in their fields and provide a valuable store of information for the readers. The Radiophile also offers its subscribers a service that is unmatched elsewhere: its large library of service sheets and manuals covers a vast range of models and these are available as photo-copies at very reasonable prices - typically half or less those charged by specialist firms. The book department has on offer hundreds of volumes dealing with vintage radio and allied subjects. In addition readers may place small advertisements free of charge. The Friends of The Radiophile, an informal association, operates "get-togethers" every six months at which readers meet to buy, sell or exchange equipment - and chat - in a friendly, relaxed atmosphere markedly different from other such functions. Full details of forthcoming events are given in the magazine.

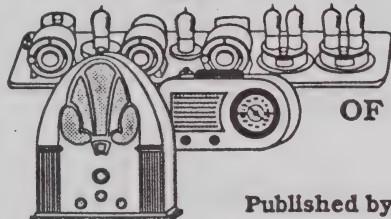
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Our telephone number is 0785 284696. It is manned from 0900 - 1300 and 1400 - 1700 Monday to Friday; an answering machine is usually available at other times.

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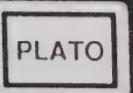
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Between NTSC (USA, Japan, Etc.) and PAL (UK, Europe, Etc.) and SECAM (France, Russia, Middle East, Etc.). We use a Snell & Wilcox Digital Converter with fitted Y/C for Super VHS and Hi-8. Also we do Standard VHS (3 Speeds NTSC) VHS-C, Standard 8mm, Betamax, U-Matic SP and Betacam SP formats.

NTSC CAMCORDERS (USA System)

- Available for hire (Hi-8 and Super VHS).

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- All formats as above, plus Philips 1500 & Video 2000.
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PLATO VIDEO

PLATO VIDEO
(Incorporating Visual Image Production)
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Telephone 0202 - 554382/310355

Gerald Myers has challenged me to get this all on one page! Let's see if we can manage it...

THE VINTAGE WIRELESS AND TELEVISION BOOK LISTING
Published regularly, containing hundreds of out-of-print old collectible wireless and TV books, magazines, etc. Send five 1st class stamps for next issue or £3.50 for next four.

THE GOVERNMENT SURPLUS WIRELESS EQUIPMENT HANDBOOK
Facsimile reprint. Gives detailed information and circuit diagrams plus photos for British and American receivers, transmitters and test equipment, etc. Large format. Incorporated is a surplus/commercial cross-referenced valve and transistor guide. Price £13.75 incl. post.

BRITISH TELEVISION, THE FORMATIVE YEARS

By Prof. R.W. Burns. Special purchase of an out-of-print book on early television 1929-1939. Sponsored by IEE History of Technology in association with the Science Museum. 488 pages. Well illustrated. A highly collectible item based on written primary source material. An invaluable addition to the literature on the subject. Published at £52, our price £45 including postage.

EARLY WIRELESS

By A. Constable. This excellent book retraces the paths of history which culminated in the final appearance of the wireless set. Many early sets are illustrated. Much information is provided for the wireless historian. 167 pages, half-tones and boards. Brand new: £8.50, p&p £1.75.

SECRET WARFARE - THE BATTLE OF CODES AND CIPHERS
By Bruce Norman. A detailed outstanding work with emphasis on the development of modern intelligence and the use of codes and ciphers. Throws light on the top secret strategies of code breaking in WW2. A history of codes is also included. Clear and concise analysis. One of the few books on cryptography. Previously unpublished material. Brand new, £4.95 including postage.

WINNING THE RADAR WAR

By Jack Nissan. A new book on WW2 radar. The suspense-filled story of the experiments and breakthroughs of electronic eavesdropping. Includes details of German radar. Author was one of the key technicians. 224pp, illus. £9.95 + £1.75 p&p.

USA RADIO SURPLUS CONVERSION HANDBOOK
Facsimile reprint, includes data, circuits and

conversion details for most American transmitters and receivers including the Command series BC348, BC221, etc. Now in three-volume set, 300pp illus. £17.95 plus £2.05 p&p. Allow 14-21 days for despatch.

SCOOP PURCHASE, THE AUTHORISED BIOGRAPHY OF SIR BERNARD LOVELL

The man responsible for Jodrell Bank. Contains detailed chapters on the development of wartime radar, including H2S and various centimetric equipment. 320 large-format pages. A must for those interested in the development of radar and radio astronomy. Many illus. A big book. £8.75 + £1.95 p&p.

BACK NUMBERS of most wireless and television magazines in stock including Practical Television, Practical Wireless, Short Wave Magazine, QST, Radio Constructor, Wireless World and many others including Radio Times. See our latest listing.

2MT WRITTLE - THE BIRTH OF BRITISH BROADCASTING

An informative book by Tim Wander. Charting the struggle to achieve a broadcasting service from the famous Melba broadcasts, through Writtle success to the birth of the BBC. Includes technical historical appendices on the Chelmsford, 2LO and Hague transmitters and work on the early wireless telephony pioneers. Much previously unpublished material, photos of stations and equipment. Brand new £12.95 + £1.75 p&p.

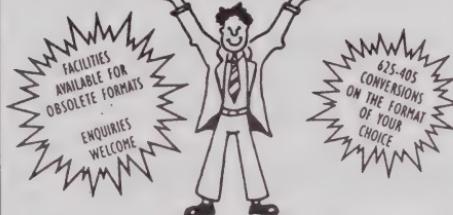
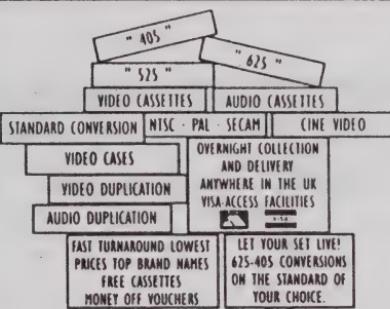
VINTAGE VALVE LISTING

A listing of hundreds of unused/new valves for sale, all types 1925-1975, including most television valves. SAE with your requirements for list.

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Thousands in stock from 1930s to 1980s. SAE with requirements.

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WIRELESS AND ELECTRICAL TRADER

18 June 1960



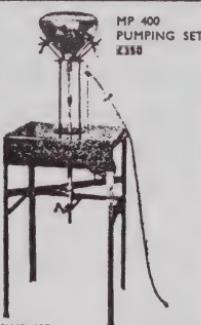
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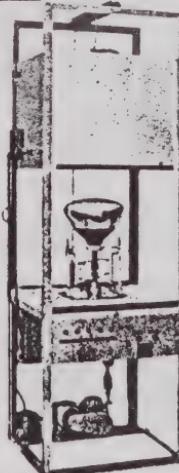
CASH PRICE COMPLETE PLANT £596

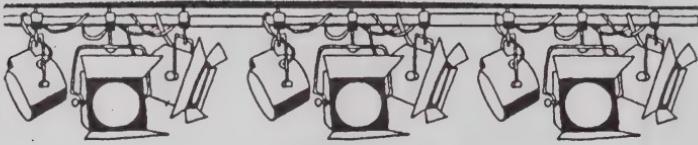
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DESCRIPTION OF OUR PROCESS

The Nottingham Electronic Valve Co. Ltd.
Kearick Street, Netherfield, Nottingham. Nottingham 240224 (2 lines)



MWS 400 COMBINATION GLASS MACHINE £148





And now our own commercial break!

1. Your subscription is now due!

Please avoid disappointment and all those other problems by sending in your renewal promptly!

2. 405-Line Test Tapes

Hour-long VHS tapes can be provided on the 405-line system; these are ideal for people with a modulator and a VHS recorder who want to display real signals on their cherished 405-line TV. We normally provide plain Test Card C (but BBC or ITA are also available). Produced on high-grade tape, price £10 including post & packing.

3. 405-Line Cameras

We have been able to obtain a very small number of Link Electronics Ltd TV cameras, type 101. This is a relatively modern solid-state camera designed in the 1970s for high-quality educational and industrial use, also for caption scanning in a broadcast environment. It was probably the last camera to be designed for 405-line as well as 625-line use.

The camera is quite compact (11" long, 5" tall and 6" wide) and produces an excellent picture. These examples will be fully tested and refurbished as necessary and offered for £50 plus postage (they are quite heavy). A "C" mount lens is required and if wanted, can be supplied for an additional £20. If you are interested, please write with an SAE; it really is first come, first served. The cameras will be ready before Christmas, hopefully during November.

5. Volume 1 Reprint

Copies of this collection are still available for £5 post-free. You get a smart yellow cover and over 100 pages of fascinating reading, so why not send off for a copy today?

MARKET PLACE

This is the area for buying and selling all kinds of things to do with television, new or old.

Want to join in? Then send us your advertisement: there is no charge, although if space is short we may have to "prune" out the least relevant adverts or hold them over until next time.

Advertisements are normally inserted for two issues: please indicate if you wish your ad. to run longer. There's no extra charge but we try to avoid repeating "stale" material.

Traders are also welcome here but we do require people who are commercial dealers to state this in their advertisements. The letter (T) at the end of an advertisement indicates that the advertisement is "trade".

Test card music and old TV programmes are subject to the same rules of copyright as other recorded works and it is unlawful to sell amateur or professional recordings of same. Swapping same for no gain is probably not illegal but *405 Alive* does not want to test the law on this subject so we will only accept advertisements from people who will indemnify us in this respect.

Also please note that we do not accept any responsibility for dealings resulting from these advertisements, which are published in good faith. That said, we will endeavour to deal sympathetically and effectively with any difficulties but at our discretion. Fortunately we have had no problems yet. In related collecting fields, replicas and reproductions can be difficult to identify, so beware of any items "of doubtful origin" and assure yourself of the authenticity of anything you propose buying. And try to have fun: after all, it's only a hobby!

We have had a number of ads requesting circuit diagrams for standards converters and Band I modulators - why haven't we printed them? Building a standards converter is a major undertaking (parts are likely to cost £300 minimum) but with four readers now engaged on developing converters, we hope we will be able to announce something soon. Watch this space! Two designs for modulators have been published in *Television magazine* - see issue 1 of *405 Alive*, pages 10/11. We can supply photocopies at 10p a page. Alternatively you can buy ready-built modulators from Wilfried Meier - see previous article.

Most valves and other components are not hard to find: we can mention **Billington Valves** (0403-865105), **Colomor Ltd** (081-743 0899), **Kenzan** (021-446 4346), **Wilson Valves** (04575-6114), **Philip Taylor** (03706-598) and **PM Components** (0474-560521). For hard-to-find transistors we have heard of **AQL Technology** (0252-341711) **The Semiconductor Archives** (081-691 7908), **Vectis Components Ltd.** (0705-669885) and **Universal Semiconductor Devices Ltd.** (0494-791289). NB: Several of these firms have minimum order levels of between £10 and £20. Would you like to recommend other firms? If you think a firm gives good service please tell us all!

HOW TO WRITE CLASSIFIED ADVERTISEMENTS THAT WORK

1. Start by mentioning the product or service you are selling or want. By doing so, you make it easier for the reader.
2. Always include the price. Research has shown that 52 per cent of people who read classified ads will not respond to ads that fail to mention a price.
3. Keep abbreviations to a minimum. Will the reader know what a NB207 is? If

it's a 1956 12" table model TV, say so!

4. Put yourself in the position of the reader. Is all the information included?

STANDARDS CONVERSION SERVICE:

I will convert your 625-line tapes to broadcast-standard 405 lines on my digital line-store standards converter. Free of charge to subscribers of *405 Alive*. Please send blank tape (VHS only) for output and return postage.

Input tapes can be accepted on Philips 1700, EIAJ, Video2000, Beta or VHS. David Looser, Maristow, Holbrook Road, Harkstead, IPSWICH, Suffolk, IP9 1BP. Phone 0473-328649. (*Publisher's note: David's offer is a most generous one and users may care to send him a free-will donation towards his not insubstantial construction costs as well. There may be a delay in handling conversions if many people take up his offer.*)

AVAILABLE AGAIN after two years: Paste Polishing No. 5. Connoisseurs will know that this paste is the ideal material for cleaning bakelite and other plastics (even plastic baths!). Unlike Brasso and other liquid polishes, it leaves no active residue, and as it also contains a waxy agent, it also gives a gloss finish. Paste Polishing No. 5 is the stuff the Post Office used to polish up the old bakelite phones and is marvellous stuff - ask any user!

Unfortunately the demand for it is reduced nowadays (BT doesn't need it now!), so it is only manufactured at intervals. A batch has just been made and you can have a carton of 12 tubes for £12.24, post paid and including VAT. Smaller quantities are not available from Greyleave, only in multiples of 12 tubes. Send your order to Greyleave Chemical Company, Fir Tree Lane, Groby, Leicester, LE6 0FH. (Tel: 0533-877777). And do it today while stocks are still available!

(If you really want only one or two tubes, small quantities were available at time of writing from THE RADIONERD, "Larkhill", Newport Road, Woodseaves, Stafford, ST20 0NP at £1.95 a tube plus postage.)

VINTAGE TVs, radios and testgear repaired and restored. Personal attention to every job and moderate prices. Estimates without obligation - deal with an enthusiast! (BVWS and BATC member) Please include SAE with all enquiries - thanks. Dave Higginson, 28 High Street, Misterton,

Doncaster, Yorks., DN10 4BU. (T). Tel: 0427 - 890768.

FOR SALE: Valves for your 405 line TV (and other equipment) can be obtained from Kenzen, Unit 9, 16-20 George Street, Balsall Heath, BIRMINGHAM B12 9RG. Send SAE for quotation by return or telephone 021-446 4346 or fax (new number - please note) 021-446 4245. Many thousands of new, boxed valves at unbeatable prices. We can also supply components, e.g. "spot-tip-body" colour coded resistors, wirewound resistors, droppers, EHT capacitors, etc. etc. Send for our latest 26 page catalogue of goodies - only £1 plus A4 size SAE with 32p stamp please. Interesting items available now include: ex-IBA UHF television transmitter (parts of), about 1/2 tonne of ex-BBC video and audio equipment (mostly 19" rack mounting) and lots of 19" video monitors. Callers welcome but please telephone the warehouse first. (T)

FOR SALE: Printed circuit board for David Looser's design of Band I modulator. Size 160 x 100 mm, undrilled. £10 including post and packing. Dave Boynes, 12 The Garth, Winlaton, Blaydon, NE21 6DD. Tel: 091-414 4751.

FOR SALE: various 1950s TVs - Pye, Bush, Ekco, etc, some in very good condition and none over £50. Steve Harris, 0244-661062.

FOR SALE: Antiference Vantenna VHF set-top aerials. Old stock in perfect condition, boxed as original. Limited quantity at £5 each plus £1 postage. Bob Webb, 78 Station Road, Rolleston-on-Dove, Burton-on-Trent, Staffs., DE13 9AB. Tele: 0283-814582.

FOR SALE: Surplus collection of valves, magazines, test equipment, books and components, all at very reasonable prices. Lists free by telephone or letter. Terry Martini, 6 Levant House, Mile End Road, London E1 4RB, and by telephone on 071-790

7499 (between 1pm and 8pm weekdays please).

FOR SALE: BBC yearbooks for 1929, 30, 31, 33, 34, 46. Generally nice clean copies, 1946 has dust wrapper. £5 each copy post-paid. Bob Morrell, 43 Eugene Gardens, Nottingham, NG2 3LF.

FOR SALE: Beulah Electronics Beukit camera. 405-line camera intended for home construction, the world's first ever home video camera. Good condition, with lens and original manual. Compact and solid-state but quite heavy to post, £50 post-paid. Marconi 31,250Hz (twice 625 line frequency) as used in SPGs, in glass valve-style envelope. Collector's items! In original boxes, two mint, one storage-soiled. £2.50 each post-paid.
Service manual for Marconi Mk IV camera. £10 (includes £4 postage!). Rediffusion modulator modules, four left at £5 each. Post 50p extra.
Crystal 20,250Hz (2x LF) for 405 line SPG. £5.50 post free.

And now, some classic books on television that you ought to have in your library... **Video Handbook** (USA, 1949. All aspects of broadcast TV, 892 pages) £12. **Understanding Television** (Davies), 1963, 504 pages £5. **Television Receiving Equipment** (Cocking), 1944, 1945, 1947 printings £4 each. **TV Installation Techniques** (USA, 1950) 330 pages £6. **Television Servicing Manual** (1950), water stained, £2. **Television Engineer's Pocket Book**, 1st edition £4. Book prices include postage. Andy Emmerson G8PTH, 71 Falcutt Way, Northampton, NN2 8PH.

FOR SALE: most EMI (HMV, Marconi, Columbia, etc.) service information for radios, TV and audio, 1929-1950s. Many original service sheets, manuals, instruction books for sale. John Gillies, 081-573 7517.

FOR SALE: TV Service instruction books. Murphy model 210 (1953), Pye CTM17S/CTM21S/CW17A/CW17CS/CW21S - £1.50 each post-paid. Andy Emmerson, 71 Falcutt Way,

Northampton, NN2 8PH (Tel: 0604-844130).

FOR SALE: (surplus contents of a small TV studio)

Broadcast-camera Link 110.
Marconi 20 mc/s sweep generator.
Diascope to fit Marconi Mk III camera, complete with slide.

3 Painton faders.
Cossor Oscilloscope Model 1039M (2.75 inch CRT). Nice little old grey item plus handbook.

Miles of PSF co-ax 1/2M 1/3M, BNC/Musa connectors. Various lengths.

Thorn studio lighting mixing desk (with "peg" memory). (Ring me for further details about this item).

Link Electronics Quad Video Delay x3 type 229.

Central Dynamics Machine Interface.
Cox Electronics Output Module J113 112 111.

NP Electronics Timing Module/Output Module.

Central Dynamics Time Code Generator (SMPTE).

EMI 2001 Aperture Corrector.
Mole Richardson cyclorama 1000w flood.

Gresham Lion Filter Box Type FB5/7/10.
Processing Amp Type PA1.

No fixed prices on the above so the first reasonable offer secures the relevant item. (Swaps considered). I have other ex-broadcast gear to offer so ask. Phone Dicky Howett on 0245-411811.

FOR SALE: Ekco TMB272 battery/mains portable TV and VHF radio. With leads, in pretty good condition, probably used by G.P.O. radio interference service. Modest price, to go to widow of former owner. Mr Trott, Bristol 0272-682888.

FOR SALE: Clean 405 line sets at modest prices. Marconi VC151 17" console (vgc, working); Pye 17" VT7 black-screen table set (styled like VT4); Ultra portable with maroon plastic case; GEC BT5145 12" wooden case, ITA converter on rear; Pye V310S 17" table set (perfect, with instruction book). Ring Alan Carter, Croydon: 081-688

7344.

FOR SALE: due to overcrowding. Rediffusion TV, dual standard; Bush T67 console; Pye 1952 console; Philips 1768U table-top; Pye Cambridge VT7CD with doors; Ekcovision TCG316 with record deck and doors. All offers considered - please phone Richard on Nottingham 0602-620597.

FOR SALE: Philips 1512 VCR machine with audio/video inputs and outputs. Comes with loads of tapes, £20. Manual for Marconi Mk VI camera, £5 post-paid. Gordon Sharpley G3LEE, Manchester. Telephone 061-748 8031.

FOR SALE: Ferguson dual-standard 19" TV in working order, plus Bush DAC90A radio, working but minus original loudspeaker. £40 the pair. David Smith, Leics. 0455-612965.

FOR SALE: Very cheap! Decca DM2/C TV, stands on 18" legs. Veneered cabinet, a bit rough on top, but electrically complete. Believed to date from 1954, been in family since 1961. Mr Rowback, 081-643 5914 (Carshalton, Surrey).

FOR SALE: Assorted television valves, 100-plus, mixture of new (boxed) and used. Please phone for details. £30 collected. Telephone Peter on 081-641 3302 evenings (Sutton, Surrey).

FOR SALE: Link Electronics Plumbicon tube conditioner and tester model 334. Marconi Mk4 Picture & waveform monitor circa 1962. Marconi Mk8 3 tube broadcast colour camera. Phillips LDK5 3 tube broadcast colour camera. Barco TVDM34 rack mount TV RX £30. Sony VO-9600 High band/SP U-Matic with or without time code board POA. Pye Mk5 Image Orthicon Camera circa 1961. Incomplete channel comprising Head (no side covers), Image orthicon tube, short camera cable, PSU, CCU, no control panel or lenses. Further details on application. Angineux 10:1 zoom lens (could be

made to fit above) one servo motor missing £65. BBC Crosshatch gen £5.00. Painton video quadrant fader £3.00. Short length of MK4B camera cable. Thorn SPG, rack mount, 405/625, circa 1963?, will need fixing. Time code generator type 304 and reader type 104 by "Rapco": smart units, LED and liquid crystal displays of Hours, Minutes and Seconds, working order, not EBU compatible £65.00. BBC portable sound mixer kit "OBA/8" three wooden cases with mixer, amplifier and power supply. Very old possibly pre-war, UX4 and UX5 valvebases. Please enquire for more details. B. Summers G8GQS 081-998 4739 (Answerphone).

FREE - YOUR AD COULD BE HERE
There's no charge at all if you're a subscriber ...

INTERESTED in telephones and telegraphs? The Telecomms Heritage Group is for you then, with four magazines and at least one swapmeet a year. Send SAE to THG, 12 Westbrook Avenue, Hampton, Middx., TW12 2RE.

WANTED: Old VTRs for formats NOT included in the list of my collection on page 45 of issue 15. Particularly National cartridge (EIAJ) and Philips 1970s 1 inch machine, and Wesgrove/Telcan machine. I will also be glad to clear machines, tapes etc of any format at no charge! Also require late 50s Sobell 405 TV with VHF radio inside. Martin Loach, Oxford 735821.

WANTED: Can anyone help? I need the power lead for the Ekcovision TMB272 portable TV of 1957. Thank you. J.M. Smith, 17 Zetland Street, Poplar, London, E14 6PR.

WANTED: XLR round 3-pin panel mounting sockets, must be in good condition, urgently wanted for restoration of OB Van termination panel. Pye, EMI, and Marconi television product catalogues for 1950 - 1970 for research for article/book. B. Summers G8GQS 081 998 4739 (Answerphone)

WANTED: Doctor Who on 16mm or video transfer (Hartnell and Troughton). Good prices paid.. Ronald McDevitt, 49 Forth View, Inverkeithing, Fife, KY11 1BA or call 0383-415665.

WANTED: Episode of Doctor Who on b/w film, any gauge, any quality, any condition, anything at all in fact. Paul Lee, 1 Beacon Hill, Sadberge, Darlington, Co. Durham, DL1 3JS.

WANTED: I am looking for examples of early colour TVs, especially dual-standard Bush, Murphy, Thorn, Pye or Decca models. Anything unusual would be of particular interest. I am also seeking examples of two early post-war GEC models, BT7092 and BT2147, and of course anything pre-war (isn't everyone?!?). My telephone number is Coddenham 0449 79-366. Mike King, Crowfield Cottage, Stone Street, Crowfield, Ipswich, Suffolk, IP6 9TA.

WANTED: Old studio equipment - camera pedestal, pan & tilt head (wedge fitting), 625 colour SPG, other stdio items would be of interests including the possibility of a complete O.B. truck, the older the better. Steve Harris, 0244-661062.

WANTED: 1. Cue lamp dome for broadcast camera, standard three-sided red plastic type. 2. *Basic Television* part two (Technical Press). 3. Buy/borrow/swap old TV programmes on 16mm film. I'm gradually building up an interesting archive! Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. 0604-844130.

WANTED: Who wants to sell me a pre-war TV set? I can offer in exchange a Telehor Nipkow disc set of 1932. I prefer a table top set. I also wish to buy the GEC 9" television and radio receiver from 1947 (SETMAKERS page 307). I offer a good price for a good set (not a ridiculous price, I am still a collector). Rudi Sillen, Limberg 31, B-2230 HERSELT, Belgium. Tel: 010 32 14-546889.

WANTED: Pre-war TV, any make, any

condition. Pye B16T. CRT's 3/3, 3/16 and 3/1, also 6/6 (or equivalent 6/4). I can collect. Pre-war books on TV. Data on Ekco TX275. Please help me with standards conversion (625->405 and/or 625->819). If you have a Philips 663A or know of it, please exchange findings with me. Offered: help with documentation. Some crystals 41.5MHz at cost (£6 each plus postage, or I can bring them to a swapmeet). Jac Janssen, Hoge Ham 117d, 5104JD DONGEN, The Netherlands. Tel. (evenings) from UK: 010 31 1623-18158. Thanks!

WANTED: Pye V4 or VT4 TV, Pye broadcast equipment, the mauve and light blue valve type. What have you? Information on the Pye Broadcast Staticon camera, type 2130 D6Y. Need manual, lenses, any info. Michael Bond, 0733-53998.

WANTED: old ATV Television Show Books, number 2 and up. Also wanted 16mm opt. sound ATV logo, starts. Mr D.W. Probert, 16 Woden Road East, Wednesbury, West Midlands, WS10 0RG.

WANTED: ITV year books from first edition (?1962) to the last. Also prints/slides of test cards/tuning signals used by the BBC/ITA. Malcolm O'Neill, 80 Welbeck Road, Carshalton, Surrey, SM5 1TA.

WANTED: *The Authority's Transmitters* (an early ITV publication) and BBC television publicity handouts of the 1950s and 60s. Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH.

WANTED: OLD CAMERA TUBES and similar imaging devices of various types and age (and related data, etc.) sought for historic (!) collection. Particularly welcome would be an Orthicon, EMI 9831 vidicons, an Ebitron, an Image Isocon or a 1.5" vidicon. Tubes that are not operable are suitable, so if you replace tubes in cameras please don't throw the old ones away but contact Peter Delaney, 6 East View Close, Wargrave, Berks., RG10 8BJ (tel:

Wargrave 0734-403121).

WANTED: by VT engineer. Dinky BBC mobile control room (model no. 967) and extending mast vehicle (no. 969). Interested in any model toys with TV or film connections. Also wanted, information, photos on any scanners in use from 1968 to the present day. Will pay sensible prices for good condition models and information. Nigel Phillips, 80 Johnstone Road, Oakdale, Poole, Dorset, BH15 3HT. Tel: 0202-670733.

SWAP: I have user handbooks for the Cossor models 930T and 934, also Bush TV24 (the last is a bit dog-eared). I'll be pleased to swap all three for the Bush TV22 instructions (I don't want to sell them). Andy Emmerson, 0604-844130.

WANTED: all 405 line equipment, sets, videos and especially a 405 line monitor (green or b/w). Also recording of old ITA knight and early Doctor Whos wanted. Telephone Peter Matthews on 0206-796544.

WANTED: Does anyone have recordings of the music used on BBC2 trade test transmissions during 1963/4? Please contact Paul Sawtell, Toad Hall, 20 Seymour Road, Wollescote, Stourbridge, West Midlands, DY9 8TB or ring 0384-896679. Thanks!

WANTED: Video recorder capable of playback on VHF Band I channel 1, also any 405 line sets and related items. Peter Matthews, Canzone del Mare, 70 Speedwell Road, Colchester, Essex, CO2 8DT. Tel: 0206-766543 (after August 92, 0206-796544).

WANTED: Any Philips dual-standard colour TV, pref 500 series 25" screen but not too fussy. Must be branded Philips and a dual-standard. Gordon Bussey, 64 Pampisford Road, Purley, Surrey, CR8 2NE. Tel: 081-660 2240.

WANTED: Sinclair micro-TVs, both bent and straight tube versions, projection TVs, test cards, Baird televisors and Baird televisors disc. Any

1930s TV from any country - possible trade for the latter (and/or cash) HMV combined radio/TV model 905 (pre-war). I will ship or import. Please state your own price. Michael Bennett-Levy, Edinburgh. Tel: 031-665 5753, fax 031-665 2839.

WANTED: Does anyone have an old Fringelevision catalogue dating from around the early 1960s? The firm was located in Marlborough, Wilts. and offered aerial components. Would borrow or swap for a number of (random) pre-1960s *Practical Televisions*. Roger Bunney, 33 Cherville Street, Romsey, Hants., SO51 8FB.

WANTED: Camera lenses, various sizes (TV88 fitting). Also camera cue light dome (EMI 2001 style). Also required: TV station ident camera badges (hopefully in pairs), logos and other bits that fall off and can make camera (cosmetic) reconstruction a bloody nightmare! Thanks for all your help last time. Can you help me this time? Contact Dicky Howett, 0245-441811.

BUY/SWAP LP records and recordings used on ITV trade test transmissions 1957 to 1967. I am only 20 records short. Ray West, 55 Hampton Road, Warwick, CV34 6JL.

TELECINE (standard 8, super 8, 9.5 and 16mm) and 525/625 PAL/SECAM/NTSC standards conversion work. Personal service using professional equipment, by a 405 enthusiast at competitive prices. Send large SAE for full details or describe your specific requirements. We regret we cannot handle 405/625 conversions! Lionel Fynn, Plato Video, 70 Richmond Hill, Bournemouth, BH2 6JA. Tel: 0202-24382.

CALLING ALL DXers! Keep up to date with *Teleradio News*, the only magazine for dedicated enthusiasts. Six issues a year cost you just £7.50 post paid, so send your name and address with a cheque made out to HS PUBLICATIONS, 7 Epping Close,

Derby, DE3 4HR.

AND IF YOU'RE AFTER THE VERY LATEST INFO ON SATELLITE TELEVISION ... you should be reading *Transponder*, the definitive subscription newsletter. For details ring 0270-580099 or send SAE to Transponder, P.O. Box 112, Crewe, Cheshire, CW2 7DS.

MOMI - THE WORLD'S MOST EXCITING CINEMA AND TELEVISION MUSEUM. South Bank, London SE1. Tel 071-928 3535 (switchboard) or 071-401 2636 (recorded information line).

NATIONAL MUSEUM OF PHOTOGRAPHY, FILM AND TELEVISION. Never mind about the first two, you'll find the television section interesting enough. Location is Prince's View, Bradford, Yorks., BD5 0TR. Telephone 0274-727488. Open Tuesdays to Sundays 10.30 - 18.00. Closed Mondays.

ON THE AIR Vintage Sound and Vision is a new venue for vintage broadcasting enthusiasts. Situated in Chester's major antiques centre, ON THE AIR has a constantly changing stock of vintage wireless, television and related items. Please write (enclosing SAE) or phone for further details and to ensure personal attention before calling. Open Monday to Saturday 10.00 - 5.30. ON THE AIR, Melody's Antique Galleries, 32 City Road, Chester. Tel: 0244 - 328968 or 661062.

TEST CARD VIDEOS FOR SALE: 55 minute video presentation made for the BATC "The Development of the TV Test Card". Andrew Emmerson interviews George Hersee, designer of Test Card F. Lots of old test cards included.

Also ... "Exotic TV Idents" covering East Germany, USSR, Poland, Czechoslovakia, Estonia and Romania, Mongolia, Libya, Algeria, New York, "BBC London" and many west European countries and satellite channels. In all there are over 80 test cards, station

idents, news programmes and start-of-day recordings, lasting 49 minutes in all.

Both titles cost £9.99, VHS PAL only. Please allow 14 days for delivery. Andy Emmerson, below.

TELECINE: At last - an affordable telecine service! I can transfer 16mm films (not other gauges, sorry) to VHS or S-VHS. You can collect/deliver and supply your own tape to save money if you prefer. Equipment has 430 lines resolution (better than S-VHS!) and handles optical and magnetic sound. Ring or send SAE for details. Andy Emmerson G8PTH, 71 Falcutt Way, Northampton, NN2 8PH. Tel: 0604-844130.

BOOKS! Large catalogue of second-hand radio and TV books. Send four first class stamps for one issue or £2.25 cheque or postal order for next four issues. Chevet Books, 157 Dickson Road, Blackpool, Lancs., FY1 2EU. Tel: 0253-751858.

SWAP: I have recently cleared the loft of a radio/TV repair shop in Hornchurch untouched since the 1950s. There are a few 405-line 1950s TV sets in various states of disrepair plus spare parts and original service manuals from the Muffin the Mule era! I would be interested in swapping old wireless material/sets for the TV items. Neil Mackay, Toad Hall, 19 Stanley Road, HORNCHURCH, Essex, RM12 4JS.

LOOKING FOR UNUSUAL OR HARD-TO-FIND CONNECTORS OR LEADS for your video camera, computer or VCR? NICAM, ATARI, SEGA, etc.. Try A.R. Communications on 0302-321066 Monday to Fridays 10 until 6. Access and Visa accepted.

ANNOUNCEMENT: Those of you who registered an interest in the "slide tapes" should contact me now! AE.

GOOD HOMES WANTED!

The following items have been offered free of charge or almost free by their generous owners, though they will doubtless accept small donations if you are pleased with what you get! This latter kind of gesture goes down well since in many instances the advertisers are not members of our group and are pensioners, widows, etc.. Where no phone number is given please enclose SAT with your letter, it's only fair.

In each case the advertiser has agreed to hold the items for one month from publication - after then it's probably the corporation rubbish dump or an antique shop. You have been warned!

Stella (Philips) ST1043A 23" TV (about 1960?) unused for last 15 years. Equipped with motor-driven tuner and full-function wired remote control, complete with servicing books and fitted with Philips dual-standard conversion. Beautiful sapele cabinet and original stand. Also a Cossor similar (non-motorised) for spares. Landmark in TV history. Mr A.W. Studley, Winscombe, Avon. Tel: Winscombe 3131.

Eidophor b/w projection set, probably 1960s. Huge, needs recovery from Scotland. Discuss with the editor!

Bush 23" TV (may be model T102). Large cabinet with doors, ? circa 1960. With original receipt, instructions, etc. Superb, free to good home. Mr Twidale, Hinckley, Leics. 0455-844819.

Philips 23" dual standard set, Bush 21" mono dual standard sets TV125U and TV141U. Free to collector. Mr Dalosso, Sutton, Surrey. 081-660 4400.

Bush TV24 (3ft tall console version of TV22). Not free but cheap. Ivor Piltrin, 0922-406355 (Walsall, Staffs.)

Two partially complete chassis for Pye D16T, valves used in Pye B16T and D16T 9" TVs, other odds and ends including Emiscope 3/16 CRT and an MW22-7 CRT. R.J. Bird, 4 Oakwood Close, Burgess Hill, Sussex, RH15 0HY. Tel: daytime 071-379 6344, evenings after 8pm 0444-243679.

Very rare 26" Bush teletext/viewdata TV complete with handset. Model is BC6482A, Z718 chassis (1976). Works well, CRT is very good - it seems a pity to dump it. Not 405 material but perhaps old enough to interest someone. John Wakely, Colliers Wood, south London. Tel. 081-542 3861 daytime.

Nice GEC bow-fronted 19" 405 set, with tambour doors. Peter Watts, Southall. 081-843 2003 evenings. Small donation would be appreciated!

Numerous turret tuners, wafers & biscuits, EHT capacitors, etc.. Phil Lucas, Ipswich 0473-710562 outside office hours or 0473-270067 24-hour answerphone.

HOW TO CONTACT 405 ALIVE

We want to hear from YOU! This is **your** magazine, so please send in your letters, notes and articles; don't be bashful, other people **will** be interested in what you're doing! As we do this for fun, not profit, we regret that we cannot pay for contributions but authors are encouraged to retain their copyright and are free to publish their articles in other publications as well. Send us your advertisements too.

If at all possible, please **TYPE** your contributions using a dark, black ribbon. This enables them to be read straight into the word-processor by a document scanner. Magic!

Contributions on computer disk are particularly welcome and your disk will be returned. I can handle most variations of IBM PC and CP/M disks in 3.5" and 5.25" size but please process your words in some popular word-processing format, ideally as an ASCII or WordStar file. Through the good offices of **Radio Bygones**, we can handle Amstrad PCW and Macintosh disks, but not BBC format. If in doubt please ring first on 0604-844130. Thanks. You can now also fax your letters, ads and articles on 0604-821647.

BACK NUMBERS

All stocks of back issues have been sold now, with the exception of the volume 1 reprint which is still available at £5 post-paid. Most of the information in the other issues will not date, though, and if you enjoyed this issue you are bound to enjoy the previous ones as well. Loan copies of issues 5 to 12 can be borrowed for you to make photocopies. The charge is 50p plus a deposit of £4.50 (returned when we get the magazine/s back!).

WOULD YOU LIKE YOUR OWN COPY OF 405 ALIVE?

Perhaps you are reading a friend's copy - now you can't wait to receive your own copy four times a year. Send a cheque for £13 (inland), Eurocheque for £14 (abroad) made out to Midshires Mediatech or \$25 cash (world air mail), which will pay for a year's subscription (four issues). The address is 71 Falcutt Way, Northampton, NN2 8PH.

LATE ADS

WANTED: For Ekco TMB272 9" portable: mains lead and connector to set. Telephone DES GRIFFEY on Luton 0582-582144.

FOR SALE: Large collection of books and magazines from 1920 - 1980. Price from 10p each, discount for large quantities. Back issues of *Practical Television*, *ETI*, *Shortwave*, *RadCom*, *PW*, *PE*, *Wireless World*. Many interesting books on all aspects of electricity, electronics, radio, TV, ham radio, even building your own televiser! Sorry, I can't provide lists (over 3,000 items) but interested purchasers are welcome to come and browse. All located in Birmingham. Please phone for address and an appointment to view: 021-472 3688.

THE BACK PAGE

405 Alive is an independent, not-for-profit magazine devoted to the study and preservation of old television technology and programming. It has no connection with, and is not subsidised by, any other organisation. Publication is at approximately three month intervals, theoretically in January, April, July and October.

Correspondence is welcomed: write to the editor, Andrew Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. If your letter is not intended for publication please indicate this clearly. All letters are gratefully received and will be acknowledged in the next issue if not sooner. If you are expecting a reply you **must** include a stamped addressed envelope and preferably also your telephone number (in case it is quicker to telephone a reply) - thanks.

Editorial policy. We print readers' addresses only in small advertisements or when asked to. We will always be happy to forward letters to contributors if postage is sent.

Advertising rates. Classified: free to subscribers, £1 per advertisement for others. Display ads, using your artwork: £5 per half page.

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Exchange publications. You may wish to contact the following allied interest groups and publications (please send SAE with all enquiries).

BRITISH VINTAGE WIRELESS SOCIETY: Gerald Wells, Vintage Wireless Museum, 23 Rosendale Road, London, SE21 8DS.

BRITISH AMATEUR TELEVISION CLUB: Dave Lawton G0ANO, Grenehurst, Pinewood Road, High Wycombe, Bucks., HP12 4DD.

NARROW BANDWIDTH TV ASSOCIATION: Mr Doug Pitt, 1 Burnwood Drive, Wollaton, Nottingham, NG8 2DJ.

TEST CARD CIRCLE: Stuart Montgomery, 2 Henderson Row, Edinburgh, EH3 5DS.

IRISH VINTAGE RADIO & SOUND SOCIETY: Henry Moore, 9 Auburn Close, Killiney, Co. Dublin.

PROJECTED PICTURE TRUST (cinema history): Harrold Brown, 2 Eleanor Gardens, Aylesbury, Bucks..

RADIO BYGONES, 9 Wetherby Close, Broadstone, Dorset, BH18 8JB.

THE RADIOPHILE, "Larkhill", Newport Road, Woodseaves, Stafford, ST20 0NP.

TELERADIO NEWS, 7 Epping Close, Derby, DE3 4HR.

TUNE INTO YESTERDAY (Old-Time Radio Show Collectors Association), 4 Prospect Terrace, Farsley, Leeds, LS28 5ES.

VINTAGE LIGHT MUSIC SOCIETY, 4 Harvest Bank Road, West Wickham, Kent, BR4 9DJ.

ROBERT FARNON SOCIETY. David Ades, Stone Gables, Upton Lane, Seavington St. Michael, Ilminster, Somerset, TA19 0PZ.

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Turn back one page and see inside rear cover for subscription details.